

SEP 25 1985

C21.12: 984/rev. 1

COMPLETED

301

MANUAL OF CLASSIFICATION

ORIGINAL

OFFICE OF
DOCUMENTATION PLANNING AND SUPPORT

PATENT AND TRADEMARK OFFICE



BASIC MANUAL
DECEMBER 1984

Revision No. 1 - June 1985

Including changes resulting from
all Classification Orders through
June 30, 1985

Am

U.S. DEPARTMENT OF COMMERCE

BEST COPY AVAILABLE

The Patent and Trademark Office does not handle the sale of this Manual, distribution of notices and revisions or changes of address of those on the subscription list.

Correspondence relating to any of the above items should be sent to the Superintendent of Documents at the following address:

Superintendent of Documents
Mail List Section
Washington, D.C. 20402

Inquiries relating to subscriptions should be directed to:

Mr. C.A. LaBarre (personal attention)
Superintendent of Documents
United States Government Printing Office
Washington, D.C. 20402

JUNE 1985

This revision to the Manual of Classification consists of replacements for the classes listed below. These changes result from Classification Orders 968 to 999 and from other miscellaneous changes deemed necessary.

Please remove each class listed and replace as indicated below. Where an entire class is abolished -- (Ab.) -- immediately follows the class number, and where a class is newly established -- (NEW) -- follows the class number.

Please remove Sections I through V and replace with the sections in this revision.

<u>CLASS</u>	<u>CLASSIFICATION ORDER</u>	<u>MISCELLANEOUS CHANGES</u>
8	998	
30	986	
33	987	
75	983, 988	
81	981, 982 and 986	
89	980	
98	975	
106	973	
112	999	
128		Title Change
131	989	
140	982	
144		Title Change
145 (Ab.)	986	
148		Miscellaneous Corrections
152	995	
159	985, 990	
162	991	
177		Digest Abolished
181		Digest Abolished
190	993	
204	968, 974 and 997	
206	992	
209	972	
211		
220	994	
228	977	
252	984	
260	996	
271	970	
279	982	
290		Digests Abolished
294	981	
310		Digests Abolished
318		Digest Abolished

BEST COPY AVAILABLE

<u>CLASS</u>	<u>CLASSIFICATION ORDER</u>	<u>MISCELLANEOUS CHANGES</u>
322		Digests Abolished
329		Digest Abolished
336		Digests Abolished
350		Digests Abolished
357	976	
419		
422	984	
424		
502	984	
514 (NEW)		Title Changes
534	996	
556	996	
604		Digest Established

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date
I-1 - I-18	June 85	----	38	1, 2	Dec. 84
II-1 - II-5	June 85	----	39		No Class
III-1 - III-39	June 85	----	40	1-4	Dec. 84
IV-1 - IV-32	June 85	----	41		No Class
V-1 - V-9	June 85	----	42	1	Dec. 84
Plants 1	Dec. 84	1963	43	1, 2	Dec. 84
2	1-3	1923	44	1	Dec. 84
3	1	1915	45		No Class
4	1-4	1923	46		No Class
5	1-4	1922	47	1	Dec. 84
6	1	1906	48	1, 2	Dec. 84
7	1	1899	49	1-5	Dec. 84
8	1-5	1938	50		No Class
9	No Class		51	1-5	Dec. 84
10	1, 2	1901	52	1-9	Dec. 84
11	No Class		53	1-5	Dec. 84
12	1-3	1901	54	1	Dec. 84
13	No Class		55	1-6	Dec. 84
14	1	1907	56	1-5	Dec. 84
15	1-6	1921	57	1-3	Dec. 84
16	1-4	----	58		No Class
17	1	1923	59	1	Dec. 84
18	No Class		60	1-9	Dec. 84
19	1, 2	1922	61		No Class
20	No Class		62	1-6	Dec. 84
21	No Class		63	1	Dec. 84
22	No Class		64		No Class
23	1	1924	65	1-5	Dec. 84
24	1-9	1904	66	1, 2	Dec. 84
25	No Class		67		No Class
26	1	1924	68	1-3	Dec. 84
27	1	1919	69	1	Dec. 84
28	1, 2	1922	70	1-5	Dec. 84
29	1-8	----	71	1, 2	Dec. 84
30	1-5	1937	72	1-6	Dec. 84
31	No Class		73	1-8	Dec. 84
32	No Class		74	1-7	Dec. 84
33	1-6	1913	75	1-3	June 85
34	1-3	1941	76	1, 2	Dec. 84
35	No Class		77		No Class
36	1, 2	1900			
37	1, 2	1922			

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date
78	No Class		119	1, 2 Dec. 84	1910
79	1 Dec. 84	1904	120	No Class	
80	No Class		121	No Class	
81	1-5 June 85	1901	122	1-5 Dec. 84	1911
82	1, 2 Dec. 84	1900	123	1-10 Dec. 84	1905
83	1-10 Dec. 84	1959	124	1 Dec. 84	1937
84	1-5 Dec. 84	1920	125	1 Dec. 84	1918
85	No Class		126	1-4 Dec. 84	1907
86	1 Dec. 84	1901	127	1 Dec. 84	1923
87	1 Dec. 84	1942	128	1-9 June 85	1919
88	No Class		129	No Class	
89	1-3 June 85	1901	130	1 Dec. 84	1880
90	No Class		131	1-3 June 85	1939
91	1-6 Dec. 84	1963	132	1, 2 Dec. 84	1920
92	1-4 Dec. 84	1963	133	1 Dec. 84	1902
93	No Class		134	1-3 Dec. 84	1943
94	No Class		135	1 Dec. 84	1901
95	No Class		136	1 Dec. 84	1925
96	No Class		137	1-9 Dec. 84	1952
97	No Class		138	1 Dec. 84	1935
98	1, 2 June 85	1926	139	1-4 Dec. 84	1923
99	1-4 Dec. 84	1935	140	1, 2 June 85	1910
100	1-3 Dec. 84	1952	141	1-4 Dec. 84	1956
101	1-4 Dec. 84	1916	142	1 Dec. 84	1899
102	1-3 Dec. 84	1902	143	No Class	
103	No Class		144	1-4 June 85	1900
104	1-3 Dec. 84	1918	146	No Class	
105	1-4 Dec. 84	1918	147	1 Dec. 84	1899
106	1-4 June 85	----	148	1-3 June 85	1918
107	No Class		149	1, 2 Dec. 84	1961
108	1, 2 Dec. 84	1963	150	1 Dec. 84	1906
109	1 Dec. 84	1938	151	No Class	
110	1, 2 Dec. 84	1906	152	1-4 June 85	1939
111	1 Dec. 84	1917	153	No Class	
112	1-3 June 85	1919	154	No Class	
113	No Class		155	No Class	
114	1-3 Dec. 84	1905	156	1-9 Dec. 84	1961
115	No Class		157	1 Dec. 84	1899
116	1-3 Dec. 84	1919	158	No Class	
117	No Class		159	1 June 85	1923
118	1-4 Dec. 84	1952			

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date		
160	1-4	Dec. 84	1942	201	1	Dec. 84	1965
161		No Class		202	1, 2	Dec. 84	1928
162	1-4	June 85	1959	203	1, 2	Dec. 84	1965
163	1	Dec. 84	1902	204	1-4	June 85	1940
164	1-5	Dec. 84	1967	205		No Class	
165	1-3	Dec. 84	1962	206	1-6	June 85	1906
166	1-4	Dec. 84	1954	207		No Class	
167		No Class		208	1-4	Dec. 84	1958
168	1	Dec. 84	1906	209	1-7	June 85	1925
169	1	Dec. 84	1919	210	1-7	Dec. 84	1957
170		No Class		211	1, 2	June 85	1927
171	1, 2	Dec. 84	1957	212	1, 2	Dec. 84	1912
172	1-8	Dec. 84	1958	213	1, 2	Dec. 84	1922
173	1-3	Dec. 84	1963	214		No Class	
174	1-3	Dec. 84	1938	215	1-3	Dec. 84	1920
175	1-4	Dec. 84	1960	216		No Class	
176		No Class		217	1	Dec. 84	1901
177	1-3	June 85	1961	218		No Class	
178	1, 2	Dec. 84	1913	219	1-7	Dec. 84	1904
179	1-4	Dec. 84	1905	220	1-4	June 85	1919
180	1-5	Dec. 84	1917	221	1-3	Dec. 84	1954
181	1, 2	June 85	1900	222	1-6	Dec. 84	1944
182	1, 2	Dec. 84	1959	223	1	Dec. 84	1935
183		No Class		224	1-3	Dec. 84	1902
184	1, 2	Dec. 84	1907	225	1, 2	Dec. 84	1959
185	1	Dec. 84	1911	226	1, 2	Dec. 84	1960
186	1	Dec. 84	1909	227	1, 2	Dec. 84	1965
187	1, 2	Dec. 84	1910	228	1-3	June 85	1965
188	1-4	Dec. 84	1920	229	1, 2	Dec. 84	1899
189		No Class		230		No Class	
190	1	June 85	1902	231	1	Dec. 84	1901
191	1	Dec. 84	1912	232	1	Dec. 84	1902
192	1-4	Dec. 84	1920	233		No Class	
193	1	Dec. 84	1922	234	1, 2	Dec. 84	1960
194	1, 2	Dec. 84	1900	235	1-4	Dec. 84	1901
195		No Class		236	1, 2	Dec. 84	1919
196	1	Dec. 84	1924	237	1	Dec. 84	1914
197		No Class		238	1-3	Dec. 84	1919
198	1-7	Dec. 84	1976	239	1-8	Dec. 84	1959
199	1	Dec. 84	1916	240		No Class	
200	1-5	Dec. 84	1919	241	1-5	Dec. 84	1944

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date
242	1-4	Dec. 84	283	1	Dec. 84
243		No Class	284		No Class
244	1-3	Dec. 84	285	1-4	Dec. 84
245	1	Dec. 84	286		No Class
246	1-4	Dec. 84	287		No Class
247		No Class	288		No Class
248	1-6	Dec. 84	289	1	Dec. 84
249	1-3	Dec. 84	290	1	June 85
250	1-3	Dec. 84	291	1	Dec. 84
251	1-4	Dec. 84	292	1-4	Dec. 84
252	1-7	June 85	293	1	Dec. 84
253		No Class	294	1-3	June 85
254	1-5	Dec. 84	295	1	Dec. 84
255		No Class	296	1-3	Dec. 84
256	1	Dec. 84	297	1-5	Dec. 84
257		No Class	298	1	Dec. 84
258	1	Dec. 84	299	1	Dec. 84
259		No Class	300	1	Dec. 84
260	1-7	June 85	301	1, 2	Dec. 84
261	1-3	Dec. 84	302		No Class
262		No Class	303	1	Dec. 84
263		No Class	304		No Class
264	1-7	Dec. 84	305	1	Dec. 84
265		No Class	306		No Class
266	1-3	Dec. 84	307	1-5	Dec. 84
267	1, 2	Dec. 84	308	1	Dec. 84
268		No Class	309		No Class
269	1-3	Dec. 84	310	1-3	June 85
270	1	Dec. 84	311		No Class
271	1-3	June 85	312	1-3	Dec. 84
272	1, 2	Dec. 84	313	1-5	Dec. 84
273	1-6	Dec. 84	314	1, 2	Dec. 84
274		No Class	315	1-5	Dec. 84
275		No Class	316		No Class
276	1	Dec. 84	317		No Class
277	1-3	Dec. 84	318	1-8	June 85
278	1	Dec. 84	319		No Class
279	1	June 85	320	1	Dec. 84
280	1-7	Dec. 84	321		No Class
281	1	Dec. 84	322	1	June 85
282	1	Dec. 84	323	1, 2	Dec. 84
		1910			1918
		1936			1956
		1910			
		1918			
		1935			1918
		1965			1918
		1912			1918
		1954			1919
		1940			1918
		1914			1919
		1913			1918
		1913			1919
		1938			1961
		1916			1919
		1963			1964
		1915			1921
		1919			1920
		1961			
		1916			1920
		1924			
		1924			1959
		1916			
		1962			1952
		1920			1925
		1918			
		1919			1952
		1918			
		1918			1927
					1950
					1941
					1943
					1943
					1947
					1943
					1947
					1947

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date		
324	1-4	Dec. 84	1953	368	1-3	Dec. 84	1980
325		No Class		369	1-3	Dec. 84	1981
326		No Class		370	1	Dec. 84	1980
327		No Class		371	1	Dec. 84	1980
328	1-3	Dec. 84	1960	372	1	Dec. 84	1982
329	1	June 85	1960	373	1, 2	Dec. 84	1982
330	1-3	Dec. 84	1959	374	1, 2	Dec. 84	1982
331	1, 2	Dec. 84	1959	375	1	Dec. 84	1980
332	1	Dec. 84	1948	376	1-4	Dec. 84	1981
333	1, 2	Dec. 84	1953	377	1, 2	Dec. 84	1983
334	1	Dec. 84	1961	378	1, 2	Dec. 84	1982
335	1-4	Dec. 84	1966	379; 380		No Classes	
336	1, 2	June 85	1952	381	1	Dec. 84	1983
337	1-5	Dec. 84	1968	382	1	Dec. 84	1983
338	1-3	Dec. 84	1959	383	1, 2	Dec. 84	1983
339	1-5	Dec. 84	1953	384	1-4	Dec. 84	1982
340	1-7	Dec. 84	1910	385-399		No Classes	
341		No Class		400	1-13	Dec. 84	1978
342		No Class		401	1-3	Dec. 84	1967
343	1-4	Dec. 84	1947	402	1	Dec. 84	1969
344		No Class		403	1-4	Dec. 84	1973
345		No Class		404	1, 2	Dec. 84	1972
346	1, 2	Dec. 84	1947	405	1-3	Dec. 84	1978
347		No Class		406	1, 2	Dec. 84	1979
348		No Class		407	1, 2	Dec. 84	1977
349		No Class		408	1-3	Dec. 84	1971
350	1-5	June 85	1966	409	1-4	Dec. 84	1979
351	1, 2	Dec. 84	1964	410	1, 2	Dec. 84	1979
352	1, 2	Dec. 84	1964	411	1-8	Dec. 84	1981
353	1	Dec. 84	1968	412	1	Dec. 84	1982
354	1-4	Dec. 84	1973	413	1	Dec. 84	1982
355	1, 2	Dec. 84	1968	414	1-11	Dec. 84	1979
356	1-3	Dec. 84	1968	415	1-3	Dec. 84	1969
357	1	June 85	1974	416	1-3	Dec. 84	1969
358	1-3	Dec. 84	1974	417	1-7	Dec. 84	1970
359		No Class		418	1-3	Dec. 84	1970
360	1, 2	Dec. 84	1973	419	1	June 85	1982
361	1-4	Dec. 84	1977	420	1, 2	Dec. 84	1982
362	1-4	Dec. 84	1977	421		No Class	
363	1, 2	Dec. 84	1977	422	1-5	June 85	1978
364	1-4	Dec. 84	1977	423	1-6	Dec. 84	1972
365	1, 2	Dec. 84	1978	424	1, 2	June 85	1968
366	1-3	Dec. 84	1977	425	1-8	Dec. 84	1971
367	1, 2	Dec. 84	1979	426	1-6	Dec. 84	1973
				427	1-5	Dec. 84	1975
				428	1-9	Dec. 84	1975
				429	1-3	Dec. 84	1976

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

Class-Page	Current Page Date	Original Classification Date	Class-Page	Current Page Date	Original Classification Date
430 1-8	Dec. 84	1979	533	No Class	
431 1-5	Dec. 84	1968	534 1-7	June 85	1984
432 1-4	Dec. 84	1972	535	No Class	
433 1-3	Dec. 84	1979	536 1, 2	Dec. 84	1976
434 1-5	Dec. 84	1980	537-543	No Classes	
435 1-5	Dec. 84	1979	544 1-7	Dec. 84	1977
436 1-3	Dec. 84	1982	545	No Class	
437-439	No Classes		546 1-7	Dec. 84	1978
440 1	Dec. 84	1980	547	No Class	
441 1	Dec. 84	1982	548 1-10	Dec. 84	1977
442-444	No Classes		549 1-9	Dec. 84	1979
445 1	Dec. 84	1983	550-555	No Classes	
446 1-5	Dec. 84	1984	556 1-5	June 85	1980
447-454	No Classes		557-559	No Classes	
455 1-4	Dec. 84	1980	560 1-3	Dec. 84	1977
456-463	No Classes		561	No Class	
464 1-3	Dec. 84	1982	562 1, 2	Dec. 84	1978
465-473	No Classes		563	No Class	
474 1-4	Dec. 84	1980	564 1-9	Dec. 84	1980
475-492	No Classes		565-567	No Classes	
493 1-5	Dec. 84	1980	568 1-8	Dec. 84	1978
494 1, 2	Dec. 84	1982	569	No Class	
495-500	No Classes		570 1, 2	Dec. 84	1980
501 1, 2	Dec. 84	1981	571-584	No Classes	
502 1-5	June 85	1983	585 1-5	Dec. 84	1979
503-513	No Classes		586-603	No Classes	
514 1-12	June 85	1985	604 1-7	June 85	1982
515-517	No Classes		605-900	No Classes	
518 1	Dec. 84	1981	901 1	Dec. 84	1984
519	No Class		902-934	No Classes	
520 1	Dec. 84	1982	935 1	Dec. 84	1984
521 1-4	Dec. 84	1978	936	No Classes	
522	No Class				
523 1-5	Dec. 84	1982			
524 1-13	Dec. 84	1982			
525 1-17	Dec. 84	1979			
526 1-6	Dec. 84	1976			
527 1	Dec. 84	1982			
528 1-9	Dec. 84	1976			
529	No Class				
530 1	Dec. 84	1984			
531	No Class				
532 1	Dec. 84	1984			

CURRENT PAGES OF MANUAL OF CLASSIFICATION

The tabulation below represents a list of current pages now appearing in the Manual of Classification

DESIGN CLASSES

<u>Class-Page</u>		<u>Current Page</u> <u>Date</u>	<u>Original Classification</u> <u>Date</u>
D1	1	Dec. 84	1967
D2	1-6	Dec. 84	1967
D3	1	Dec. 84	-----
D4	1	Dec. 84	1967
D5		No Class	
D6	1-5	Dec. 84	1972
D7	1-3	Dec. 84	1973
D8	1-4	Dec. 84	1969
D9	1-3	Dec. 84	1967
D10	1, 2	Dec. 84	1973
D11	1-3	Dec. 84	1976
D12	1-3	Dec. 84	1973
D13	1	Dec. 84	1976
D14	1, 2	Dec. 84	1976
D15	1	Dec. 84	1976
D16	1, 2	Dec. 84	1976
D17	1	Dec. 84	1979
D18	1	Dec. 84	1979
D19	1, 2	Dec. 84	1974
D20	1	Dec. 84	1979
D21	1-4	Dec. 84	1979
D22	1	Dec. 84	1967
D23	1, 2	Dec. 84	1967
D24	1	Dec. 84	1976
D25	1, 2	Dec. 84	1976
D26	1-3	Dec. 84	1980
D27	1	Dec. 84	1975
D28	1	Dec. 84	1976
D29	1	Dec. 84	1976
D30	1	Dec. 84	1967
D31		No Class	
D32	1	Dec. 84	1981
D33	1	Dec. 84	1976
D34	1	Dec. 84	1981
D35-D46		No Classes	
D47	1	Dec. 84	-----
D48-D58		No Classes	
D59	1	Dec. 84	-----
D60-D63		No Classes	
D64	1	Dec. 84	-----
D65-D91		No Classes	
D92	1	Dec. 84	-----
D93-D98		No Classes	
D99	1	Dec. 84	1967

BEST COPY AVAILABLE

CHEMICALGroup 110

DIRECTOR: DENNIS E. TALBERT
(Room CP3-9D17, Ext. 7-9600)

Group Classifier: Doris Funderburk Penn
(Room CM2-903, Ext. 7-3484)

Group Classifier: Walter Pretka
(Room CS4-1A11, Ext. 7-0103)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
111	L. DeWayne Rutledge	3-10E02	7-6722
112	Winston A. Douglas	3-9E02	7-2517
113	John Doll	3-9A15	7-2517
114	Brian Hearn	3-10D35	7-6728
116	Delbert E. Gantz	3-9D35	7-3029
118	William Dixon	3-9E06	7-6698

Group 120

DIRECTOR: CHARLES E. VAN HORN
(Room CP2-9A09, Ext. 7-3637)

Group Classifier: Doris J. Funderburk Penn
(Room CM2-935, Ext. 7-1677)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
121	Henry R. Jiles	2-9D01	7-3920
122	Donald G. Daus	2-8B32	7-3920
123	Donald B. Moyer	2-8A15	7-3920
124	Charles F. Warren	2-8D31	7-3920
125	Albert T. Meyers	3-8B02	7-3920
126	Natalie Trousof	3-9B32	7-3920
127	Thomas G. Wiseman	2-9D31	7-3920
128	Robert J. Warden	2-8D19	7-3920
129	Glennon H. Hollrah	2-9A01	7-3920

Group 130

DIRECTOR: ROBERT F. WHITE
(Room CP3-8D19, Ext. 7-3804)

Group Classifier: Herbert Koller
(Room CM2-911, Ext. 7-3821)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
131	Edward Kimlin	3-7A01	7-9871
132	Raymond Jones	3-8D01	7-9848
133	S. Leon Bashore, Jr.	3-7E02	7-9856
134	Barry Richman	3-9B04	7-0647
135	Frank Lutter	3-8D35	7-9807
136	Richard Fisher	3-8B20	7-9830
137	Donald Czaja	3-8A01	7-9839
138	Jay Woo	3-8D15	7-9833

Group 150

DIRECTOR: JAMES O. THOMAS, JR.
(Room CP2-11A02, Ext. 7-6525)

Group Classifier: Frank Cervi
(Room CM2-928, Ext. 7-3791)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
151	John Bleutge	2-10D02	7-6525
152	Norman Morgenstern	2-11B02	7-6525
153	John Knight, III	2-10A22	7-6525
154	George F. Lesves	2-11D02	7-6525
155	Joseph Schofer	2-10E02	7-6525
156	John E. Kittle	2-11E02	7-6525
157	Paul Lieberman	2-10A10	7-6525

ELECTRICALGroup 210

DIRECTOR: BOBBY R. GRAY
(Room CP4-9D19, Ext. 7-2488)

Group Classifier: Herman O. Jones
(Room CS4-1E08, Ext. 7-0164)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
211	L. T. Hix	4-9B40	7-2903
212	J. D. Miller	4-9A01	7-5050
213	B. A. Reynolds	4-9D01	7-5070
214	A. David Pellinen	4-8B24	7-2884
215	John Gonzales	4-9D25	7-5070
216	Elliot A. Goldberg	4-8B02	7-2765
217	Joseph V. Truhe, Sr.	5-9E16	7-5080

Group 220*/290

DIRECTOR: KENNETH L. CAGE
(Room CP4-10D19, Ext. 7-2877)

Group Classifier: Herbert L. Bryan, Jr.
(Art Units 221, 222)
(Room CS4-1E14, Ext. 7-0167)

Group Classifier: Frank Cervi
(Art Unit 223)
(Room CM2-907A, Ext. 7-3791)

Group Classifier: J. Paul Guertin
(Art Unit 290)
(Room CS4-1E06, Ext. 7-0163)

*Security Group--all entries through
Room CP4-10C17 (receptionist)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
221	Vacant	4-10E27	7-2894
222	Vacant	4-10E04	7-2897
223	Vacant	4-10B30	7-2037
291	Wallace R. Burke	4-10B04	7-2912
292	Bernard Ansher	4-10D03	7-2863

Group 230

DIRECTOR: EARL LEVY
(Room CP4-11D19, Ext. 7-5089)

Group Classifier: Paul R. Woods
(Room CS4-1F08, Ext. 7-0821)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
232	J. D. Thomas	4-11B02	7-0375
233	Stuart Hecker	4-11D01	7-0326
234	Errol A. Krass	4-11B22	7-8055
235	Raymond Cardillo	4-11D17	7-4316
236	Jerry Smith	4-11E10	7-8041
237	Gareth Shaw	4-11B40	7-8047

Group 240

DIRECTOR: EDWARD KUBASIEWICZ
(Room CP4-7D19, Ext. 7-2906)

Group Classifier: Edith S. Jackmon
(Art Unit 241 - 246)
(Room CS4-1E07, Ext. 7-0154)

Group Classifier: William E. Heaton
(Art Unit 247)
(Room CS4-1A09, Ext. 7-0104)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
241	William I. Price	4-6B02	7-3301
242	Harvey C. Hornsby	4-7A15	7-2913
243	Steven Marcus	4-6B21	7-3221
245	Stuart Levy	4-7E16	7-3451
246	Charles Frankfort	4-6D17	7-3204
247	Werner H. Schroeder	4-6D01	7-3304

ELECTRICALGroup 250

DIRECTOR: SAMUEL S. MATTHEWS
(Room CP4-8D19, Ext. 7-2084)

Group Classifier: John Leonard
(Room CS4-1F06, Ext. 7-0635)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
251	William L. Sikes	4-8E04	7-2734
252	Eugene R. La Roche	4-7B18	7-4826
253	Andrew James	4-7B02	7-4835
254	Stanley Miller	4-7B40	7-4752
255	Davis L. Willis	4-8A15	7-4345
256	Alfred E. Smith	4-8B40	7-4802
257	John K. Corbin	4-8D32	7-3083

Group 260

DIRECTOR: STEPHEN G. KUNIN
(Room CP4-5D17, Ext. 7-3320)

Group Classifier: James W. Cranson, Jr.
(Art Unit 261 - 264,
266, 267, Part of 268)
(All of 260 Except Class 73)
(Room CS4-1E05, 557-0155)

Group Classifier: Edith S. Jackmon
(Art Units 265,
Part of 268)
(Room CS4-1E07, Ext. 7-0154)

Group Classifier: Vacant
(Art Units 266, 267)
(Room CS4-1E05, Ext. 7-0155)

<u>Art Unit</u>	<u>SPE</u>	<u>Room</u>	<u>Phone</u>
261	Gene Z. Robinson	4-5B02	7-6868
262	John C. Martin	4-5B16	7-6860
263	Robert L. Griffin	4-5E02	7-1139
264	John W. Caldwell	4-5E16	7-3356
265	Stewart J. Levy	4-6E02	7-6116
266	David K. Moore	4-5D01	7-6878
267	Michael J. Lynch	4-5D03	7-6879
268	James L. Rowland	4-6E14	7-9894

PLAN AND USE OF THE MANUAL OF CLASSIFICATION

Locating patents in a field of technology or science embraced by the U. S. Patent Classification System requires a good measure of judgement applied to the continuous and coordinated use of three tools:

1. The Index to Classification
2. The Manual of Classification
3. The Class and Subclass Definitions

The Index is an alphabetical list of subject headings referring, by indicia numbers, to specific pertinent classes and subclasses for the classification system. The Index is particularly useful as an initial means of entry into the system for those either lacking experience in the use of the classification or unfamiliar with the particular technology under study.

The Manual of Classification lists the numbers and descriptive titles of all the classes and subclasses. Titles - more than 100,000 - are necessarily brief and thus indicative and not definitive. Hence, searches will be expedited by using the Manual as a key to the Definitions from the outset.

The Definitions comprise statements of the scope embraced by each of the official classes and subclasses (exclusive of the Plant Class and Designs), together with search notes directing the searcher to related subject matter in other classes and subclasses.

The Index and Manual may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402. Copies of Definitions - class by class - may be purchased from the Patent and Trademark Office, Information Resources Branch, Washington, D. C. 20231.

This Manual contains:

Start on page

1. A list of the contents of the Manual showing the current page date for each class and the year in which the class was originally classified. CP-1
2. A list showing an organization of science and technology into three main groups. 1-5
3. A hierarchical arrangement of class titles in each main group by related subject matter. 1-6
4. A list, in numerical order, of each examining group and art unit indicating examining group personnel, their location, and phone numbers 11-1
5. A list in numerical order by art unit indicating the classification assigned each. 111-1
6. A list of classifications, in numerical order by class number, giving the class title, the art unit to which it is assigned, and the examiner search room in which it can be found. IV-1
7. A list of classes in alphabetical order by class title giving the class number indicating where its schedule can be found in this Manual. V-1
8. The class schedules for PLANTS (page P-1). PLT-1

9. Class schedules (i.e., listing of the subclass titles and numbers arranged in organized order for each class) arranged in the numerical sequence by class number. 2-1
10. The Design classes (at the end of the Manual). D-1

UNOFFICIAL SUBCLASSES AND DIGESTS

Over a span of years Patent Examiners have created "unofficial" subclasses and digests to facilitate searches within the arts under their jurisdiction. An inventory of these patents in the Examiner search file has enabled listing unofficial subclasses and digests in the Manual of Classification.

In order to distinguish between an unofficial subclass and digest, the following definitions should be considered:

Unofficial Subclass: A grouping of patents selected out from an official subclass by Examiner and then made an indented subclass under the official subclass with an alpha designation following the official numeric designation. Insofar as the original subclass then does not have all the patents officially classified therein, it is given the alpha designation "R" (indicating Residual). It may be noted that the numeric subclass equates to the residual subclass plus the unofficial subclasses indented thereunder, e.g., in Class 24, BUCKLES, BUTTONS, CLASPS, ETC., official subclass 129, One-piece, is shown as follows:

129R . One-piece
 129B . . . Sheet material
 129A . . . Slack adjuster
 129D . . . Rubber
 129C . . . Wire
 129W . . Swagged, deformable

Note: The Public Search Room file comprises only those patents listed according to the official (numeric) classification.

Digest: A collection of copies of patents based on a concept which relates to a class but not to any particular subclass of that class. It should be noted that the "original" classification of a patent cannot comprise a digest insofar as digests are "outside" of the official classification arrangement. The digests are listed in numeric sequence at the end of each class schedule.

There are no definitions for the unofficial subclasses, nor is it contemplated to define these subclasses beyond the context of the titles and the definitions of the official subclasses from which they were formed (R subs).

The unofficial subclasses have been "double indented" under the subclass from which they were formed as a indicator that rules of hierarchy do not apply to these subclass groupings, nor are any other of the rules of official classification applicable. These art collections are offered only to the extent they may be helpful as a search assist and should not necessarily be considered to be a complete collection of the art represented by the title.

HOW TO READ SUBCLASS TITLES AND DEFINITIONS

The full title of any subclass in a given class schedule includes: (1) the class title; and if applicable, any or all of (2) the title of most adjacent higher subclass in the first vertical column at the extreme left of the particular schedule; (3) the title of most adjacent higher subclass indented thereunder in the second vertical column; (4) the title of the most adjacent higher subclass indented thereunder in the third vertical column; and so on. For example, in Class 2, APPAREL, the full title of subclass 15 should read as:

"APPAREL, GUARDS AND PROTECTORS,
Eye shields (e.g., hoodwinks or blinds,
etc.)

Similarly, the definition of any subclass includes the definition of the class plus that of any subclasses under which it may be indented.

BASIS OF CLASSIFICATION

All patentable subject matter is created for an ulterior utility and this characteristic has been selected as the primary basis for classification. Arts or instruments having like functions, producing like products, or achieving like effects, are brought together, but the functions or effects that are chosen as a basis of classification must be proximate or essential, not remote or accidental.

GENERAL SCOPE OF CLASSES

The statutory categories of invention are product, process, apparatus, composition of matter, and certain varieties of plants. Classes may be made of the basis of any one or more of these.

Product, process, apparatus, and composition of matter may be in the same class (e.g., Class 131, Tobacco).

Process, apparatus, and plant varieties are all in Class 47, Plant Husbandry.

Processes, particularly mechanical, are commonly classified with the instruments specially adapted to aid in practicing them (e.g., Class 65, Glass Manufacturing).

Processes limited to the use of particular ingredients for producing a specified composition are classified with the composition (e.g., Class 23, Chemistry, Analytical and Physical Processes; Class 106, Compositions, Coating or Plastic).

Products or fabricated shaped articles are sometimes classified in classes by themselves

(e.g., Class 411, EXPANDED, THREADED, HEADED, AND DRIVEN FASTENERS, OR LOCKED OR COUPLED BOLTS OR NUTS; Class 245, Wire Fabrics and Structure), but some are in classes associated with the processes and instruments for making them (e.g., Class 59, Chain, Staple and Horseshoe Making).

Accessories are generally classified with the instrument to which they are peculiar.

ARRANGEMENT OF SUBCLASSES

The subclasses in each class (other than class 130 and some Design classes) are generally arranged in the order of complexity or comprehensiveness of the inventions included therein. The complex wholes such as the "special" work and combined machines (or processes) come first, followed in the order named, by simple whole machines, the major parts, the minor parts, or details and accessories, and the residuum or "miscellaneous". Preceding subclasses are deemed "superior" to succeeding ones. This order of subclasses permits a uniformity in assigning disclosures containing features classifiable in more than one subclass. The basic rule is to assign one patent copy (original) corresponding to a claimed invention to the first appearing of a series of coordinate subclasses that may properly receive it, and place addition (cross-reference) copies where appropriate in the later appearing subclass or subclasses, adapted to receive its parts. In a class having the subclasses arranged according to this rule, no "original" patent copy should be found in any coordinate subclass following the one properly entitled to receive it, although it may be found either in preceding subclasses as a part of some other organization, or in an indented more specific subclass.

A "rule" of superiority and inferiority applies also to patents containing subject matter classifiable in more than one class, the patent being assigned to the class designed to receive the largest claimed combination with a cross-reference, if necessary, for other claimed

13

disclosures to the more elemental classes. Between classes, however, the positional relation (hierarchy) that exists between subclasses of the same class does not obtain, and "superiority" and "inferiority" is given only by the Definitions.

Illustrated or other disclosed matter not claimed as a part of the invention, if classified, may be placed by cross-reference.

SUGGESTIONS FOR SEARCH

If the use of the index to the classification fails to reveal a restricted field of search the following is a suggested procedure for delineating a field of search:

- (1) Determine what is the essential function or effect of the art or instrument to be sought.
- (2) Scan the titles in the major groupings at the front of the Manual or in the numerical or alphabetical list of class titles and not those that appear to include the invention sought.
- (3) Not particularly that one which has the most intensive or specific title that includes the invention.
- (4) Inspect carefully the class definition and notes thereto.
- (5) If the class definition indicates the selected class as the proper one, scan the schedule of subclasses of the selected class, inspecting first the major coordinate subclasses whose titles begin farthest to the left and the initial letters of which are arranged in vertical alignment.

- (6) Select the first appearing major subclass title that includes a characteristic of the invention and study the definitions thereof.
- (7) If the major subclass definition includes the invention, scan the schedule of minor subclasses indented one place to the right immediately under the selected major subclass, selecting the first appearing title to include an additional characteristic of the invention.
- (8) So proceed until the most specific minor subclass is reached whose title and definition indicate the inclusion of the invention in question, and then inspect the art composing it.
- (9) If this subclass contains nothing pertinent, search the more generic subclasses under which it is indented, the miscellaneous subclasses, and those above it, the titles of which indicate the possibility that they may include the thing sought.
- (10) If the pertinent art is still not found, search the other possible classes noted in step 2 in the same way.

Failure to find any pertinent art, usually indicates that the proper place in the classification has not been located. The classifiers engaged in creating new, and maintaining the existing, classifications are always available for consultation in outlining fields of search.

Note: In the index, the plus sign adjacent a subclass number refers to all the subclasses indented thereunder.

PATENT OFFICE CLASSES

Arranged by Related Subjects

Main Groups

- I. CHEMICAL AND RELATED ARTS
- II. COMMUNICATIONS, DESIGNS, RADIANT ENERGY,
WEAPONS, ELECTRICAL, AND RELATED ARTS
- III. BODY TREATMENT AND CARE, HEATING AND COOLING,
MATERIAL HANDLING AND TREATMENT, MECHANICAL
MANUFACTURING, MECHANICAL POWER, STATIC, AND
RELATED ARTS

Note: In the following lists, classes preceded by an asterisk
(e.g., *75) appear more than once. Subject titles used at
times differ from class titles.

I. CHEMICAL AND RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE (III, Class 428 for products of this class)	201	DISTILLATION: PROCESSES, THERMOLYTIC
		202	DISTILLATION: APPARATUS
		203	DISTILLATION: PROCESSES, SEPARATORY
8/94.1-142	BLEACHING AND DYEING: FLUID TREATMENT AND CHEMICAL MODIFICATIONS OF TEXTILES AND FIBERS	48	GAS, HEATING AND ILLUMINATING
400-696	(III, Class 8, Manipulative fluid treatment; Class 68, Textiles, Fluid Treating Apparatus)	430	RADIATION IMAGERY CHEMISTRY - PROCESS, COMPOSITION OR PRODUCT
427	COATING PROCESSES (III, Classes 101 and 118 for printing and coating apparatus)	252	COMPOSITIONS (Miscellaneous) (In some instances compositions specialized to a particular art are classified with that art, e.g., Class 51, etc.) (II, Class 52, Radioactive material)
134/1-42	CLEANING AND LIQUID CONTACT WITH SOLIDS (III, Class 134 for apparatus)	502	CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR PROCESS OF MAKING
*75	REFINING, RECOVERY (METALLURGY) (II, Class 75 for powder metallurgy)	424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS (II, Class 424, for radioactive medicine)
419	POWDER METALLURGY: PROCESS	71	CHEMISTRY, FERTILIZERS
148	METAL TREATMENT	44	FUEL AND IGNITING DEVICES
65	GLASS MANUFACTURING	*210/500.1+	LIQUID PURIFICATION OR SEPARATION (Filter Material)
264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES (II, Class 264 for treating of explosive or radioactive material)	*51/293+	ABRADING (Material) (III, Class 51 for abrading machines and processes)
426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS, AND PRODUCTS (III, Class 99 treating apparatus)	520 - 528	SYNTHETIC RESINS OR NATURAL RUBBERS
162	PAPER MAKING AND FIBER LIBERATION		

I. CHEMICAL AND RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
106	COMPOSITIONS, COATING OR PLASTIC	196	MINERAL OILS: APPARATUS
420	NONFERROUS ALLOYS OR METALLIC COMPOSITIONS	127	SUGAR, STARCH, AND CARBOHYDRATES (See notes to the definitions of Class 422 for distribution of this art)
*75	METALLURGY (Alloys)	422	PROCESS DISINFECTING, DEODORIZING, PRESERVING OR STERILIZING, AND CHEMICAL APPARATUS
501	COMPOSITIONS: CERAMIC	62/4, 8, 44, 532-545	REFRIGERATION (III, Class 62, Refrigeration, generally)
436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	55	GAS SEPARATION
23	CHEMISTRY, ANALYTICAL AND PHYSICAL PROCESSES	261	GAS AND LIQUID CONTACT APPARATUS
435	CHEMISTRY, MOLECULAR BIOLOGY AND MICROBIOLOGY	159	CONCENTRATING EVAPORATORS
429	ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT, AND PROCESS	210	LIQUID PURIFICATION OR SEPARATION
136	BATTERIES, THERMOELECTRIC AND PHOTO-ELECTRIC	209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS (III, Class 209, for assorting)
204	ELECTRICAL AND WAVE ENERGY (II, Class 204 for actinide series elements)	428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES
423	CHEMISTRY, INORGANIC (II, Class 423 for actinide series compounds)	935	Genetic Engineering: Recombinant DNA Technology, Hybrid or Fused Cell Technology and Related Manipulations of Nucleic Acids (Cross-Reference Art Collection)
518	CHEMISTRY, FISCHER-TROPSH REACTION; OR PURIFICATION, RECOVERY OR CONVERSION OF THE PRODUCTS OF SUCH PROCESSES		
*260	CARBON COMPOUNDS (II, Class 260 for actinide or nitro compounds) (see also classes 530 - 585)		
208	MINERAL OILS: PROCESSES AND PRODUCTS		

19

BEST COPY AVAILABLE

11. COMMUNICATIONS, DESIGNS, RADIANT ENERGY,
WEAPONS, ELECTRICAL, AND RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	RADIOACTIVE AND ACTINIDE		COMMUNICATIONS - (cont)
376	Induced Nuclear Reactions, Systems and Elements	382	Image Analysis
423/2-20,	Chemistry, Inorganic (actinide series compound)	343	Special Radio Systems (e.g., radar, antennas)
249-261	(I, Class 423, Chemistry, Inorganic)	370	Multiplex Communications
75/84,	Metallurgy (rare or radioactive articles; powder metallurgy)	179	Telephony
122.5,	(I, Class 75, Metallurgy alloys and refining)	381	Electrical Audio Signal Processing and Systems
122.7,		178	Telegraphy
200-227			
424/1, 1.5	Drug, Bio-Affecting and Body Treating Compositions (radioactive)	375	Pulse or Digital Communications
	(I, Class 424, Drug, Bio-Affecting and Body Treating Compositions, generally)	455	Telecommunications
204/1.5	Chemistry, Electrical and Wave Energy (actinide series element)	367	Communications, Electrical: Acoustic Wave Systems and Devices
	(I, Class 204, Chemistry, Electrical and Wave Energy, generally)	334	Tuners
252/	Compositions (radioactive)	332	Modulators
478, 517	(I, Class 252, Compositions (Miscellaneous))	329	Demodulators and Detectors
260/429.1,	Chemistry, Carbon Compounds (actinide or nitric)	116	Nonelectric Signals and Indicators
429.2,	(I, Class 260, Chemistry, Carbon Compounds, generally)		CALCULATORS, COMPUTERS OR DATA PROCESSING SYSTEMS
466, 467		371	Error Detection/Correction and Fault Detection/Recovery
264/0.5, 3	Plastic Shaping (radioactive or explosive material)	*364/737	Arithmetical Errors
	(I, Class 264, Plastic and Non-Metallic Article Shaping or Treating: Processes)	*235/375	Registers (Systems Controlled by Data Bearing Records)
	COMMUNICATIONS	/400	(Ordnance or Weapon System Computers)
340	Communication Electrical	/419	(Record Controlled Calculators)
358	Television, Facsimile		

11. COMMUNICATIONS, DESIGNS, RADIANT ENERGY,
WEAPONS, ELECTRICAL, AND RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	CALCULATORS, COMPUTERS OR DATA PROCESSING SYSTEMS - (cont)		RADIANT ENERGY - (cont)
364	Electrical Computers and Data Processing Systems	378	X-ray or Gamma Ray Systems or Devices
377	Electrical Pulse Counters, Pulse Dividers or Shift Registers: Circuits and Systems	*250/316.1- 319, 330-334 338-353	Infrared ray
*235/61	Registers (Mechanical Calculators)	372	Coherent Light Generators
	INFORMATION STORAGE	350	Optics, Systems and Elements
369	Dynamic Information Storage or Retrieval	351	Optics, Eye Examining, Vision Testing and Correcting
360	Dynamic Magnet Information Storage or Retrieval	352	Optics, Motion Pictures
365	Static Information Storage and Retrieval	354	Photography (Note: Class 430, Photographic Chemistry, Processes and Material, 1)
*235/435	Registers (Coded Sensors)	355	Photocopying
346	Recorders	353	Optics, Image Projectors
	MEASURING, TESTING, PRECISION INSTRUMENTS (1, Class 23, Chemical Testing)	362	Illumination
73	Measuring and Testing	84	Music (Horns, Whistles, Sirens, Bells, Compressional Wave Generators, Class 116, Signals and Indicators, subs. 137 to 172; Class 340, Communications, Electrical, subs. 384+)
324	Electrical Measuring and Testing		
*250/250	Wavemeters		
356	Optics, Measuring and Testing	181	Acoustics
368	Horology, Time Measuring Systems or Devices	361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES (Nonelectrical device with electrical operation or control is classified with nonelectrical device)
374	Thermal Measuring and Testing		
177	Weighters		
33	Geometrical Instruments	219	Electric Heating (Nonelectric Heating, 111)
*250	RADIANT ENERGY (1, Class 204, Chemistry, Electrical and Wave Energy)		

19

BEST COPY AVAILABLE

II. COMMUNICATIONS, DESIGNS, RADIANT ENERGY,
WEAPONS, ELECTRICAL, AND RELATED ARTS

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES - (cont)		ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES - (cont)
373	Industrial Electric Heating Furnaces	*307	Miscellaneous Systems
290	Prime-Mover Dynamo Plants (III, Power Plants and Nonelectric Motors)	313	Electric Lamp and Discharge Device Structure
318	Motive Power Systems	357	Solid State Barrier Layer Device Structure (e.g., Transistor)
187/29	Elevators (electric control) (III, Class 187, Elevators, structure)	310	Generator or Motor Structure
320	Battery and Condenser Charging and Discharging	335	Electricity, Magnetically Operated Switches, Magnets and Electromagnets (Class 200, Electricity, Circuit Makers and Breakers, below, for mechanically actuated switches in general, and Class 337, Electricity, Electrothermally or Thermally Actuated Switches, below, for thermally actuated switch structures)
331	Oscillators		
330	Amplifiers		
328	Miscellaneous Electron Space Discharge Device Systems	337	Electricity, Electrothermally or Thermally Actuated Switches (Class 200, Electricity, Circuit Makers and Breakers, below, for mechanically actuated switches in general, and Class 335, Electricity, Magnetically Actuated Switches, Magnets and Electromagnets, above, for magnetically actuated switch structures)
*307/400-430	Miscellaneous Nonlinear Reactor Systems		
*307/200+	Miscellaneous Nonlinear Solid State Device Circuits		
333	Wave Transmission Lines and Networks		
363	Electrical Power Conversion Systems		
323	Voltage Magnitude and Phase Control Systems	336	Inductor Devices
315	Electric Lamp and Discharge Devices, Systems	361/433+	Electrolytic Devices (I, Classes 136, Batteries and 204, Chemistry, Electrical and Wave Energy)
314	Consumable Electrode Type		
322	Single Generator Systems	361/271+	Capacitor Devices

26

BEST COPY AVAILABLE

II. COMMUNICATIONS, DESIGNS, RADIANT ENERGY,
WEAPONS, ELECTRICAL, AND RELATED ARTS

<u>Class</u>	<u>Subject</u>
	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES - (cont)
338	Electrical Resistors
200	Switches (Class 335, Electricity, Magnetically Actuated Switches, Magnets and Electromagnets, above, for magnetically actuated switches, and Class 337, Electricity, Electrothermally or Thermally Actuated Switches, above, for thermally actuated switches)
174	Conductors and Insulators
	AMMUNITION, WEAPONS
89	Ordnance (III, Class 124, Mechanical guns and projectors)
244/14	Aircraft, Torpedoes (III, Class 244, Aircraft Structure)
114/20-25	Ships, Torpedoes (III, Class 114, Ship Structure)
42	Firearms
102	Ammunition and Explosives
149	Explosive and Thermic Compositions or Charges
86	Ammunition and Explosive Charge Making
D-1 to D-99	DESIGNS

21

BEST COPY AVAILABLE

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	BODY TREATMENT CARE, ADORNMENT (I, Class 424, Drug, Bio-Affecting and Body Treating Compositions)	231	PLANT AND ANIMAL HUSBANDRY - (cont) Whips and Whip Apparatus
433	Dentistry		TEACHING
3	Artificial Body Members	434	Education, Demonstration and Cryptography (II, for navigation and radar)
128	Surgery		
604	Surgery	40	Card, Picture and Sign Exhibiting
132	Toilet	272	AMUSEMENT AND EXERCISING DEVICES
63	Jewelry	273	Amusement Devices, Games
27	Undertaking	446	Amusement Devices, Toys
	APPAREL AND RELATED ARTS	124	Mechanical Guns and Projectors
2	Apparel	99/275-450	FOOD PREPARING AND TREATING APPARATUS (I, Food Compositions and Processes)
223	Apparatus		HEATING, COOLING (II, Electric Heating)
36	Boots, Shoes and Leggings		
12	Boot and Shoe Making	62	Refrigeration (I, Liquified gas)
69	Leather Manufactures	237	Heating Systems
112	Sewing	236	Automatic Temperature and Humidity Regulation
	PLANT AND ANIMAL HUSBANDRY (Note: Class 100, Presses, for balers; Class 289, Knots and Knot Tying Class 130, Threshing)	432	Heaters
PLT	Plants	122	Liquid Heaters and Vaporizers
6	Bee Culture	126	Stoves and Furnaces
17	Butchering	431	Combustion
43	Fishing, Trapping and Vermin Destroying	110	Furnaces (Solid or Combined Fuels)
47	Plant Husbandry	165	Heat Exchange
119	Animal Husbandry		BUILDINGS
54	Harness	135	Tents, Canopies, Umbrellas and Canes
168	Farriery	109	Safes, Bank Protection and Related Devices
		52	Static Structures

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	BUILDING - (cont)		TEXTILES
14	Bridges	8/147-159	Bleaching and Dyeing; Fluid Treatment and Chemical Modification of Textiles and Fibers (1, for processes and compositions)
404	Road Structure, Process and Apparatus		
182	Fire Escapes, Ladders, Scaffolds		
220	RECEPTACLES	245	Wire Fabrics and Structure
312	Support, Cabinets Structures	289	Knots and Knot Tying
190	Trunks and Hand Carried Luggage	28	Textiles, Manufacturing
206	Special Receptacles or Packages	26	Cloth Finishing
215	Bottles and Jars	66	Knitting
229	Envelopes, Wrappers and Paperboard Boxes (Class 93, Paper Manufactures)	87	Braiding, Netting and Lace Making
		139	Weaving
150	Purses, Wallets, and Protective Covers	57	Spinning, Twisting and Twining
383	Flexible Bags		
217	Wooden Receptacles	19	Fiber Preparation
248	SUPPORTS		EARTH WORKING AND AGRICULTURAL MACHINERY
5	Beds	405	Hydraulic and Earth Engineering
297	Chairs and Seats	299	Mining or In Situ Disintegration of Hard Material
211	Racks		
108	Horizontally Supported Planar Surfaces	166	Wells
	CLOSURES, PARTITIONS, PANELS (Building and receptacle classes for other closures, partitions, and panels)	175	Boring or Penetrating the Earth
		111	Planting
49	Movable or Removable Closures	171	Unearthing Plants or Buried Objects
160	Flexible and Portable	37	Excavating
256	Fences	56	Harvesters
		172	Earth Working

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
194	CHECK-CONTROLLED APPARATUS	137	FLUID HANDLING
	DISPENSING	98	Ventilation
	(For the distribution of this art see notes to definitions of Class 222, Dispensing, and Receptacles)	4	Baths, Closets, Sinks and Spittoons
133	Coin Handling	138	Pipes or Tubular Conduits
141	Filling Portable Receptacles with Fluent Material	251	Valves and Valve Actuation
169	Fire-Extinguishers		VEHICLES
291	Track Sanders	244	Aeronautics (II, for aerial torpedoes)
239	Sprinkling, Spraying and Diffusing Fluids	114	Ships (II, for torpedoes)
222	Dispensing	441	Buoys, Rafts, and Aquatic Devices
221	Article	440	Marine Propulsion
232	Deposit and Collection Receptacles	191	Electricity, Transmission to Vehicles
414	MATERIAL OR ARTICLE HANDLING	104	Railways
258	Delivery to or from moving vehicle	246	Railway Switches and Signals
186	Merchandising	105	Rolling Stock
406	Conveyers, Fluid Current	238	Surface Track
212	Traversing Hoists	280	Land (e.g., chassis and running gear)
198	Power-Driven Conveyers	298	Dumping
187	Elevators (II, Electric control)	180	Motor Vehicles
193	Chutes, Skids, Guides and Ways	296	Bodies and Tops
224	Package and Article Carriers		
294	Hand and Hoist-Line Implements (Class 81, Tools)		
*901	Robots *Accepts No Application		

24

BEST COPY AVAILABLE

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	VEHICLES - (cont)		COATING, PRINTING, AND PRINTED MATERIAL; STATIONARY, BOOKS
	Parts (Mechanisms and Machine Elements, below)	118	Coating Apparatus (I, Class 427, Coating Processes)
301	Wheels and Axles	184	Lubrication
295	Railway	101	Printing
152	Resilient Tires and Wheels	400	Typewriting Machines
305	Wheel Substitutes	199	Type Casting
213	Draft Appliances	276	Type Setting
278	Animal Draft Appliances	401	Coating Implements with Material Supply
293	Fenders	281	Books, Strips and Leaves
410	FREIGHT ACCOMMODATION ON FREIGHT CARRIER	282	Manifolding
*267	Spring Devices	283	Printed Matter
441	Buoys, Rafts, and Aquatic Devices		MANUFACTURING, ASSEMBLING, INCLUDING SOME CORRELATIVE MISCELLANEOUS PRODUCTS
	MOTORS, ENGINES, PUMPS (II, Electricity, for electric motors)	164	Metal Founding
60	Power Plants (II, for chemical reaction motors)	266	Metallurgical Apparatus
123	Internal-Combustion Engines	*29/1-25.42, 81-91.8, 560, 560.1	Metal Working (General Manufacturing)
417	Pumps	412	Bookbinding: Process and Apparatus
91	Motors, Expansible Chamber Type	53	Package Making
415	Rotary Kinetic Fluid Motors or Pumps	59	Chain, Staple and Horseshoe Making
416	Fluid Reaction Surfaces (I.e., Impellers)	76	Metal Tools and Implements, Making
185	Mechanical Motors	79	Button Making
418	Rotary Expansible Chamber Devices	493	Paper Manufacturing or Products
92	Expansible Chamber Devices		

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	MANUFACTURING, ASSEMBLING, INCLUDING SOME CORRELATIVE MISCELLANEOUS PRODUCTS - (cont)		CUTTING, COMMINUTING, AND MACHINING - (cont)
131	Tobacco	30	Cutlery
147	Coopering	51	Abrading
157	Wheelwright Machines	408	Cutting by Use of Rotating Axially Moving Tool
163	Needle and Pin Making	82	Turning
227	Elongated-Member Driving Apparatus	83	Cutting
270	Sheet Material Associating or Folding	409	Gear Cutting, Milling and Planing
300	Brush, Broom and Mop Making	125	Stone Working
445	Electric Lamp or Space Discharge Component or Device Manufacturing	144	Woodworking
		142	Wood Turning
*29/ /148.3-179, 400-426.6, 428-559, 569-623.5, 631, 825-885	Metal Working (Methods)	225	Severing by Tearing or Breaking
			PLASTIC DEFORMATION, PRESSING, OR TREATING (I, Plastics)
*29/700-824	Metal Working (Assembling Apparatus)	72	Metal Deforming
*29/650	Plural Diverse Manufacturing Apparatus	425	Plastic Article or Earthenware Shaping or Treating: Apparatus (I, Class 264, Plastic and Nonmetallic Article Shaping or Treating: Processes)
	CUTTING, COMMINUTING, AND MACHINING		
234	Selective Cutting (e.g. Punching)	100	Presses
130	Threshing	413	Sheet-Metal Container Making
241	Solid Material Comminution or Disintegration	140	Wireworking
		228	Metal Fusion Bonding
10	Bolt, Nail, Nut, Rivet and Screw Making	249	Static Molds
*29/26-80 561-568	Metal Working (Miscellaneous Machining)		MISCELLANEOUS TREATING (I, for chemical treatment and physical separation)
407	Cutters, For Shaping	494	Imperforate Bowl, Centrifugal Separators

<u>Class</u>	<u>Subject</u>	<u>Class</u>	<u>Subject</u>
	MISCELLANEOUS TREATING - (cont)		MACHINE ELEMENT AND MECHANISMS - (cont)
209/509-707	Classifying, Separating and Assorting Solids	308/1	Machine Elements, Bearings, and Guides
366	Agitating	11-14, 38-57, 79-91, 173-236, 241-245	
134	Cleaning and Liquid Contact with Solids (1, for cleaning processes)		(11, Class 308/10, Magnetic Supports)
34	Drying and Gas or Vapor Contact With Solids	384	Bearing or Guides
68	Textiles, Fluid Treating Apparatus	173	Tool Driving or Impacting
38	Textiles, Ironing, or Smoothing	188	Brakes
15	Brushing, Scrubbing and General Cleaning	192	Clutches and Power-Stop Control
	HANDLING OR STORING SHEETS, WEBS, STRANDS, AND CABLE	*254/1-134	Implements or Apparatus for Applying Pushing or Pulling Force (Force Multipliers)
402	Blinder Device Releasably Engaging Aperture or Notch of Sheet	269	Work Holders
226	Advancing Material of Indeterminate-Length	303	Fluid-Pressure Brake and Analogous Systems
242	Winding and Reeling	16	MISCELLANEOUS HARDWARE
*254/	Implements or Apparatus for Applying Pushing or Pulling Force (Cable Hauling or Strand Placing)	70	Locks
134.3-198			TOOLS
271	Sheet Feeding or Delivering	7	Compound Tools
74	MACHINE ELEMENT AND MECHANISMS	*29/213-283	Metal Working (Assembling Devices)
*29/110-132	Metal Working (Rolls)	81	Tools
474	Endless Belt Power Transmission Systems and Components	145	Woodworking Tools
464	Rotary Shafts, Gudgeons, Housings and Flexible Couplings for Rotary Shafts	403	JOINTS AND CONNECTIONS
		339	Electrical Connectors
		285	Pipe

June 1985

III. BODY TREATMENT AND CARE, HEATING AND COOLING, MATERIAL
HANDLING AND TREATMENT, MECHANICAL MANUFACTURING
MECHANICAL POWER, STATIC, AND RELATED ARTS

I-18

<u>Class</u>	<u>Subject</u>
	JOINTS AND CONNECTIONS - (cont)
279	Chucks and Sockets
277	Joint Packings
	FASTENINGS
292	Closure
24	Buckles, Buttons, Clasps, etc.
411	Expanded, Driven, Headed, and Threaded; Nut and Bolt Locks
*267	MISCELLANEOUS SPRING DEVICES

JUNE 1985

CLASSES ARRANGED BY ART UNIT

111- 1

			SUBCLASSES	
CLASS TITLE			FROM	TO
<u>ART UNIT 111</u>				
CLASS	75	METALLURGY	0.5AA 3 10A 85 122.1 123AA 251 DIG. 2	0.5R 5 83 96 133.5 951
CLASS	148	METAL TREATMENT	1 2 9C 35 127 133 400	4 31.57 125 131 162 442
CLASS	266	METALLURGICAL APPARATUS	44 102 171	100 165 905
CLASS	420	NONFERROUS ALLOYS OR METALLIC COMPOSITIONS	ALL	
CLASS	428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES	544 567 923	545 687 941
<u>ART UNIT 112</u>				
CLASS	204	CHEMISTRY, ELECTRICAL AND WAVE ENERGY	1R 2 164 DIG. 1	1T 159 435 DIG. 13
CLASS	252	COMPOSITIONS	301.16	301.36
<u>ART UNIT 113</u>				
CLASS	75	METALLURGY	1R 6 97A DIG. 3	2 9 121
CLASS	106	COMPOSITIONS, COATING OR PLASTIC	109	116
CLASS	252	COMPOSITIONS	62.2 301.4F 378P 950	62.9 301.6S 378R 951
CLASS	266	METALLURGICAL APPARATUS	101 170	
CLASS	423	CHEMISTRY, INORGANIC	1 21.1	248

JUNE 1985

111- 2

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	423	CHEMISTRY, INORGANIC	262 DIG. 1	659 DIG. 19
ART UNIT 114				
CLASS	29	METAL WORKING	2 569L 623.1 730	591 623.5 731
CLASS	136	BATTERIES, THERMOELECTRIC AND PHOTOELECTRIC	243	293
CLASS	148	METAL TREATMENT	1.5 33 171 DIG. 1	33.6 191 DIG. 174
CLASS	429	CHEMISTRY, ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT AND PROCESS	ALL	
ART UNIT 116				
CLASS	44	FUEL AND IGNITING DEVICES	1SR 10A	6 48
CLASS	208	MINERAL OILS: PROCESSES AND PRODUCTS	ALL	
CLASS	252	COMPOSITIONS	492 DIG. 18	
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	96.5C DIG. 42	96.5T
CLASS	502	CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR PROCESS OF MAKING	ALL	
CLASS	585	CHEMISTRY, HYDROCARBONS	1 7	6 956
ART UNIT 118				
CLASS	44	FUEL AND IGNITING DEVICES	50 DIG. 1	79 DIG. 4
CLASS	71	CHEMISTRY, FERTILIZERS	1 5 900 DIG. 2	64.13 904 DIG. 4
CLASS	106	COMPOSITIONS, COATING OR PLASTIC	74 117 312 DIG. 1 DIG. 8	108 121 315 DIG. 6

JUNE 1985

III- 3

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 252	COMPOSITIONS		9 386	58
CLASS 501	COMPOSITIONS: CERAMIC		ALL	
ART UNIT 121 -----				
CLASS 260	CHEMISTRY, CARBON COMPOUNDS		1 239.6 330 349 397.6 453AM 453.7 453.99 464 465.1 684 DIG. 44	239.95 330.3 397.7R 453.3 453.8 455R 465.9 708
CLASS 544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		1 31 47 179	14 34 58.7 223
CLASS 546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		21 79 111 184 192 242	25 97 138 185 206 353
CLASS 548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		300 416 530 566	379 420 559 579
CLASS 549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		1 233 252 275 297 456	58 262 290 312 471
ART UNIT 122 -----				
CLASS 260	CHEMISTRY, CARBON COMPOUNDS		239AA 239A 239E 243.3 245.2R 245.7 463 550	239EQ 239B 244.4 245.4
CLASS 544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		15 224 297	30 282 362

31

BEST COPY AVAILABLE

JUNE 1985

III- 4

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		364 392	373 410
CLASS 546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		1 26 98 150 183	12 78 107 163
CLASS 548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		100 120 257 400 421 450 460 503 560	109 249 261 415 438 451 491 529 565
CLASS 568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		18 32 38 44 65	30 36 40 62 77
ART UNIT 123 -----				
CLASS 260	CHEMISTRY, CARBON COMPOUNDS		112.5LH 453AB 456NS 465B 502.6	112.5T 453AL 460 465R 513.7
CLASS 424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS		2 6 10 14 48 86 89	39 70 90
CLASS 530	CHEMISTRY, LIGNINS OR REACTION PRODUCTS THEREOF		ALL	
CLASS 536	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		1.1 4.1 51 112	29 55.3 128
CLASS 549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		59 335 357 369 432	90 336 366 428 455
ART UNIT 124 -----				
CLASS 252	COMPOSITIONS		522A	522R

JUNF 1985

111- 5

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
			FROM	TO
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	398 462A 502.3 665B 920	428.5 462R 665R 990
CLASS	534	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	7 550	887
CLASS	556	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL	
CLASS	564	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1 297	224 512
CLASS	568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1	17
CLASS	570	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL	
ART UNIT 125 -----				
CLASS	8	BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS	160 405	161 435
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	112.7 239.5 397	239.57 397.5
CLASS	424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	4 40 71 114 DIG. 1	5 47 84 197.1 DIG. 15
CLASS	514	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	ALL	
ART UNIT 126 -----				
CLASS	252	COMPOSITIONS	372	377
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	239.1 350L 453.4 453.9 500.5H 502A 502.4A 543PN	350R 453.6 500.5R 502R 502.5R 549
CLASS	518	CHEMISTRY, FISCHER-TROPSCH REACTION; OR PURIFICATION, RECOVERY OR CONVERSION OF THE PRODUCTS OF SUCH PROCESSES	ALL	

JUNE 1985

III- 6

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	560	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL	
CLASS	562	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL	
CLASS	564	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	225	296
CLASS	568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	31 37 41 63 300 950	43 64 923 959
ART UNIT 127				

CLASS	424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	85 87 91	88 93
CLASS	435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	44 183 240 317	173 234 261 948
CLASS	935	GENETIC ENGINEERING: RECOMBINANT DNA TECHNOLOGY, HYBRID OR FUSED CELL TECHNOLOGY AND RELATED MANIPULATIONS OF NUCLEIC ACIDS	1 89	75 111
ART UNIT 128				

CLASS	424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	3 7.1 11 94	9 113
CLASS	426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS AND PRODUCTS	7	64
CLASS	435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	1 174 235 262	43 182 239 316
CLASS	436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	501 506 547 801 805	503 541 548 803 829
CLASS	935	GENETIC ENGINEERING: RECOMBINANT DNA TECHNOLOGY, HYBRID OR FUSED CELL TECHNOLOGY AND RELATED MANIPULATIONS OF NUCLEIC ACIDS	76	88

BEST COPY AVAILABLE

34

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III- 7

CLASS TITLE			SUBCLASSES	
			FROM	TO
ART UNIT 129				

CLASS	71	CHEMISTRY, FERTILIZERS	3 65 DIG. 1	4 128
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	239HM 239D 239R 239.3A 242.2 245.1 245.5 245.71 330.6 351 501.1	239.3T 245.6 245.91 330.9 396R 501.21
CLASS	544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	35 59 283 363 374	46 178 296 391
CLASS	546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	13 108 139 164 186 207	20 110 149 182 191 241
CLASS	548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	110 250 262 439 452 492	119 256 269 449 459 502
CLASS	549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	200 234 263 291 313 337 367 429 472	232 251 274 296 334 356 368 431 563
ART UNIT 131				

CLASS	152	RESILIENT TIRES AND WHEELS	151 331.1 415 DIG. 1 DIG. 9 DIG. 11 DIG. 18	322 373 565 DIG. 7 DIG. 16 DIG. 19

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III- 8

CLASS TITLE			SUBCLASSES FROM TO	
CLASS	156	ADHESIVE BONDING AND MISCELLANECUS CHEMICAL MANUFACTURE	1 90 148 272.2 523 537 625 DIG. 1	79 144 241 509 529 598 910 DIG. 51
CLASS	252	COMPOSITIONS	79.1	79.5
ART UNIT 132 -----				
CLASS	426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS AND PRODUCTS	1 66	6 811
ART UNIT 133 -----				
CLASS	62	REFRIGERATION	4 8 532	44 545
CLASS	65	GLASS MANUFACTURING	ALL	
CLASS	159	CONCENTRATING EVAPORATORS	2.1 5 14 17.1 26.1 DIG. 1	3 12 15 24.3 49 DIG. 42
CLASS	162	PAPER MAKING AND FIBER LIBERATION	1 361 DIG. 1	359 416 DIG. 12
CLASS	202	DISTILLATION: APPARATUS	152 232 DIG. 1	209 238
CLASS	203	DISTILLATION: PROCESSES, SEPARATORY	ALL	
ART UNIT 134 -----				
CLASS	23	CHEMISTRY, ANALYTICAL AND PHYSICAL PROCESSES	ALL	
CLASS	156	ADHESIVE BONDING AND MISCELLANECUS CHEMICAL MANUFACTURE	600 DIG. 61	624 DIG. 114
CLASS	210	LIQUID PURIFICATION OR SEPARATION	321.1 500.2 634 929	321.5 655

36

BEST COPY AVAILABLE

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	422	PROCESS DISINFECTING, DEODORIZING, PRESERVING OR STERILIZING, AND CHEMICAL APPARATUS	1 187	185 902
CLASS	436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	1 20 900	7 183 910
ART UNIT 135				

CLASS	55	GAS SEPARATION	ALL	
CLASS	209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS	1 4 45 128	3 44 70 508
CLASS	261	GAS AND LIQUID CONTACT APPARATUS	ALL	
ART UNIT 136				

CLASS	127	SUGAR, STARCH AND CARBOHYDRATES	ALL	
CLASS	134	CLEANING AND LIQUID CONTACT WITH SOLIDS	1	42
CLASS	210	LIQUID PURIFICATION OR SEPARATION	85 322 501 656 DIG. 3	320 500.1 633 928 DIG. 17
ART UNIT 137				

CLASS	264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES	1.1 4 5 DIG. 1	2.7 574 DIG. 84
ART UNIT 138				

CLASS	48	GAS, HEATING AND ILLUMINATING	ALL	
CLASS	156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE	80 145 242 510 530	89 147 271 522 536
CLASS	196	MINERAL OILS: APPARATUS	ALL	
CLASS	201	DISTILLATION: PROCESSES, THERMOLYTIC	ALL	
CLASS	202	DISTILLATION: APPARATUS	81 210 239	151 230 270

JUNE 1985

III-10

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	249	STATIC FOLDS	ALL	
CLASS	252	COMPOSITIONS	371	
CLASS	425	PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS	ALL	
ART UNIT 142				

CLASS	106	COMPOSITIONS, COATING OR PLASTIC	123.1 173.1 197.1	123.2 197.2
ART UNIT 143				

CLASS	106	COMPOSITIONS, COATING OR PLASTIC	38.51	
CLASS	528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	329.1	
ART UNIT 144				

CLASS	8	BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS	116.1 127.1	
ART UNIT 151				

CLASS	204	CHEMISTRY, ELECTRICAL AND WAVE ENERGY	159.11	160.1
CLASS	260	CHEMISTRY, CARBON COMPOUNDS	998.11	998.19
CLASS	521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	40	49.8
CLASS	523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	106 121 129 134 139 164 171 200 220 427 436 450 464 513 518	108 123 135 159 166 174 217 300 434 445 468 527
CLASS	524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	1 59 79 275	8 71 279

38

BEST COPY AVAILABLE

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-11

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		401 492 500 502 588 597 610 650 705 763 779 847 857	456 497 542 700 791 865
CLASS 525	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		10 54.5 112 134 168 302 339 421 445 502 518	54 111 133 167 301 324 420 444 501 517 941
CLASS 527	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		500	503
CLASS 528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		4 27 196 246 370 901	26 43 204 264 391
ART UNIT 152				
CLASS 118	COATING APPARATUS		ALL	
CLASS 148	METAL TREATMENT		6	6.35
CLASS 427	COATING PROCESSES		1 214	213 445
ART UNIT 153				
CLASS 260	CHEMISTRY, CARBON COMPOUNDS		97 113	112T 123.7
CLASS 521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		50	921
CLASS 523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES		109 115 136	120 138

39

BEST COPY AVAILABLE

JUNE 1985

CLASSES ARRANGED BY ART UNIT

111-12

CLASS TITLE			SUBCLASSES	
			FROM	TO
CLASS	523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	175 218 435 446 451 506 514	181 219 449 461 512 516
CLASS	524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	9 72 80 270 323 392 462 498 589 592 599 611 701 706 732 742 764 797 871	58 78 185 274 353 400 473 590 595 607 612 704 713 735 754 799 881
CLASS	527	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	100 600	403 604
CLASS	528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	1 26.5 44 205 265 310 330 392 902	3 195 245.5 308 328 369 503 950
ART UNIT 154				

CLASS	346	RECORDERS	200	227
CLASS	428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES	85 141 403 540 688	97 402 537.7 543 922
ART UNIT 155				

CLASS	260	CHEMISTRY, CARBON COMPOUNDS	DIG. 14 DIG. 43 DIG. 45	DIG. 41 DIG. 47

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-13

		CLASS TITLE	SUBCLASSES FROM TC	
CLASS	520	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	ALL	
CLASS	521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	25	39
CLASS	523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	1 111 124 130 160 167 303 462 500 517	105 114 128 132 161 170 426 463 505
CLASS	524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	186 280 354 457 474 499 501 543 591 596 598 608 714 736 755 765 792 800 848 900	269 322 391 461 491 587 609 731 741 762 778 796 846 856 929
CLASS	525	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	7 54.1 111.5 133.5 167.5 301.5 326.1 420.5 444.5 501.5 517.5 942	8 54.45 338
CLASS	526	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	ALL	

41

BEST COPY AVAILABLE

JUNE 1985

III-14

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 528		SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	308.1	309.1
CLASS 536		ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	2 30 56	3 50 111
ART UNIT 156				
CLASS 428		STOCK MATERIAL OR MISCELLANEOUS ARTICLES	1 98	84 140
CLASS 430		RADIATION IMAGERY CHEMISTRY - PROCESS, COMPOSITION OR PRODUCT	ALL	
ART UNIT 157				
CLASS 8		BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS	94.10 116.4 127.5 181 436 DIG. 1	115.7 127 142 404 939 DIG. 21
CLASS 51		ABRADING	293 DIG. 19	309 DIG. 30
CLASS 106		COMPOSITIONS, COATING OR PLASTIC	1.05 38.6 122 124 174 198 316 DIG. 7	38.4 38.9 172 196 311 901
CLASS 252		COMPOSITIONS	8.57 60 67 80 367 500 523 DIG. 1 DIG. 19	8.9 62 79 181 370 521 581 DIG. 17
CLASS 585		CHEMISTRY, HYDROCARBONS	6.3	6.6
ART UNIT 173				
CLASS 162		PAPER MAKING AND FIBER LIBERATION	360.1	
ART UNIT 177				
CLASS 159		CONCENTRATING EVAPORATORS	1.1 4.01	4.4

BEST COPY AVAILABLE

JUNE 1985

III-15

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 159	CONCENTRATING EVAPORATORS		13.1 16.1 25.1 900	13.4 16.3 25.2 906
CLASS 209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS		127.1	127.4
ART UNIT 211				
CLASS 84	MUSIC		1 2	521
CLASS 181	ACOUSTICS		18 126 141 143 403	30 138 296 404
CLASS 235	REGISTERS		1A	201R
CLASS 350	OPTICS, SYSTEMS AND ELEMENTS		4.1 117 258	4.2 129 265
CLASS 352	OPTICS, MOTION PICTURES		ALL	
CLASS 354	PHOTOGRAPHY		ALL	
CLASS 355	PHOTOCOPYING		1 18	2 133
CLASS 361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES		247 271 433	266 330 436
ART UNIT 212				
CLASS 307	ELECTRICAL TRANSMISSION OR INTER-CONNECTION SYSTEMS		109	110
CLASS 308	MACHINE ELEMENTS, BEARINGS AND GUIDES		10	
CLASS 310	ELECTRICAL GENERATOR OR MOTOR STRUCTURE		1 306 DIG. 2	300 800 DIG. 6
CLASS 318	ELECTRICITY, MOTIVE POWER SYSTEMS		35 114	38 135
CLASS 320	ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING		ALL	
CLASS 322	ELECTRICITY, SINGLE GENERATOR SYSTEMS		ALL	

43

BEST COPY AVAILABLE

JUNE 1985

III-16

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
			FROM	TO
CLASS	323	ELECTRICITY, POWER SUPPLY, OR REGULATION SYSTEMS	ALL	
CLASS	363	ELECTRIC POWER CONVERSION SYSTEMS	ALL	
ART UNIT 213				

CLASS	219	ELECTRIC HEATING	ALL	
CLASS	338	ELECTRICAL RESISTORS	ALL	
ART UNIT 214				

CLASS	200	ELECTRICITY, CIRCUIT MAKERS AND BREAKERS	1TK 50AA 52A 80A 175 DIG. 1	41 50R 61.93 151 180 DIG. 47
CLASS	307	ELECTRICAL TRANSMISSION OR INTER- CONNECTION SYSTEMS	1 111 326 400	108 157 328 423
CLASS	314	ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES	ALL	
CLASS	361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES	1 267 331 417 437	246 270 396 432
CLASS	373	INDUSTRIAL ELECTRIC HEATING FURNACES	ALL	
ART UNIT 215				

CLASS	174	ELECTRICITY, CONDUCTORS AND INSULATORS	ALL	
CLASS	336	INDUCTOR DEVICES	ALL	
CLASS	355	PHOTOCOPYING	3BE	16
CLASS	361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES	397	416
ART UNIT 216				

CLASS	177	WEIGHING SCALES	ALL	
CLASS	335	ELECTRICITY, MAGNETICALLY OPERATED SWITCHES, MAGNETS AND ELECTRO- MAGNETS	ALL	

44

BEST COPY AVAILABLE

JUNE 1985

III-17

CLASSES ARRANGED BY ART UNIT

			SURCLASSES	
			FROM	TO
CLASS TITLE				
CLASS	337	ELECTRICITY, ELECTROTHERMALLY OF THERMALLY ACTUATED SWITCHES	ALL	
CLASS	346	RECORDERS	1.1	165
CLASS	358	PICTORIAL COMMUNICATION; TELEVISION	296	304
ART UNIT 217				

CLASS	84	MUSIC	1.01 DIG. 1	1.28 DIG. 30
CLASS	187	ELEVATORS	29AB	29Y
CLASS	235	REGISTERS	310	311
CLASS	290	PRIME-MOVER DYNAMO PLANTS	ALL	
CLASS	318	ELECTRICITY, MOTIVE POWER SYSTEMS	1 39 136 DIG. 2	34 113 832
CLASS	340	COMMUNICATIONS, ELECTRICAL	347AD	347R
CLASS	368	HOROLOGY: TIME MEASURING SYSTEMS OR DEVICES	ALL	
ART UNIT 221				

CLASS	42	FIREARMS	ALL	
CLASS	89	ORDNANCE	ALL	
CLASS	102	AMMUNITION AND EXPLOSIVES	200 293 362	282 705
CLASS	114	SHIPS	20A	25
CLASS	181	ACOUSTICS	0.5 101 139 142 400	125 140 402
CLASS	244	AERONAUTICS	3.1 14	3.3
CLASS	340	COMMUNICATIONS, ELECTRICAL	850	861
CLASS	367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES	140	191
CLASS	376	INDUCED NUCLEAR REACTIONS, SYSTEMS AND ELEMENTS	ALL	

45

BEST COPY AVAILABLE

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-18

			SUBCLASSES	
CLASS TITLE			FROM	TO
ART UNIT 222				
CLASS	178	TELEGRAPHY	22.01 37 99	22.19
CLASS	179	TELEPHONY	1.5FS	1.5S
CLASS	310	ELECTRICAL GENERATOR OR MOTOR STRUCTURE	301	305
CLASS	315	ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS	10 364	30 411
CLASS	330	AMPLIFIERS	4	4.3
CLASS	332	MODULATORS	7.51	
CLASS	343	COMMUNICATIONS, RADIO WAVE	5AF	465
CLASS	356	OPTICS, MEASURING AND TESTING	1 4 5 28 141 152	29
CLASS	358	PICTORIAL COMMUNICATION; TELEVISION	114 259	124
CLASS	367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES	1 95 900	92 139 912
CLASS	375	PULSE OR DIGITAL COMMUNICATIONS	2.1	2.2
CLASS	434	EDUCATION, DEMONSTRATION, CRYPTOGRAPHY	1	10
CLASS	455	TELECOMMUNICATIONS	26	30
ART UNIT 223				
CLASS	44	FUEL AND IGNITING DEVICES	7.1	7.7
CLASS	60	POWER PLANTS	205	220
CLASS	75	METALLURGY	84 122.5 228 DIG. 1	84.5 122.7 250
CLASS	86	AMMUNITION AND EXPLOSIVE-CHARGE MAKING	ALL	
CLASS	102	AMMUNITION AND EXPLOSIVES	283 301	292 361

44

BEST COPY AVAILABLE

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 136	BATTERIES, THERMOELECTRIC AND PHOTOELECTRIC		200	242
CLASS 148	METAL TREATMENT		126.1 132	
CLASS 149	EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES		ALL	
CLASS 204	CHEMISTRY, ELECTRICAL AND WAVE ENERGY		1.5 161	163S
CLASS 252	COMPOSITIONS		1 181.1 302 380 387 582 960	8.55R 299.7 366 385 478 700 965
CLASS 260	CHEMISTRY, CARBON COMPOUNDS		466	467
CLASS 264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES		0.5 3A 4.1	3R 4.7
CLASS 419	POWDER METALLURGY - PROCESSES		ALL	
CLASS 422	PROCESS DISINFECTING, DEODORIZING, PRESERVING OR STERILIZING, AND CHEMICAL APPARATUS		186 903	186.3 907
CLASS 423	CHEMISTRY, INORGANIC		2 249	20 261
CLASS 424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS		1.1	
CLASS 427	COATING PROCESSES		213.3	213.36
CLASS 428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES		402.2 539.5 546	402.24 566
CLASS 436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING		8 500 504 542 800 804	19 505 546
CLASS 534	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		10	16
CLASS 568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES		924	949

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-20

CLASS TITLE			SUBCLASSES	
			FROM	TO
ART UNIT 232				
CLASS	340	COMMUNICATIONS, ELECTRICAL	146.2	
CLASS	364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	200,300,900	
			700	736
			742	788
ART UNIT 233				
CLASS	235	REGISTERS	375	386
			419	495
CLASS	360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL	81	137
CLASS	365	STATIC INFORMATION STORAGE AND RETRIEVAL	ALL	
ART UNIT 234				
CLASS	235	REGISTERS	400	418
CLASS	364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	424	467
			480	512
			514	582
ART UNIT 235				
CLASS	179	TELEPHONY	6.01	6.2
CLASS	358	PICTORIAL COMMUNICATION; TELEVISION	244	244.2
			310	348
			906	908
CLASS	360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL	1	80
CLASS	369	DYNAMIC INFORMATION STORAGE OR RETRIEVAL	1	32
			43	54
			58	62
			64	
			69	70
			76	
			83	95
			97	
			100	126
			128	152
			174	175
			275	276
ART UNIT 236				
CLASS	364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	130	194
			400	423
			468	479
			513	
			600	608

48

BEST COPY AVAILABLE

JUNE 1985

III-21

CLASSES ARRANGED BY ART UNIT

		CLASS TITLE	SURCLASSES FROM TO	
CLASS	364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	737 800	741 864
CLASS	371	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY	ALL	
ART UNIT 237 -----				
CLASS	364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	200,300,900 513.5 500	
CLASS	381	ELECTRICAL AUDIO SIGNAL PROCESSING AND SYSTEMS	29	53
ART UNIT 241 -----				
CLASS	150	PURSES, WALLETS, AND PROTECTIVE COVERS	ALL	
CLASS	190	TRUNKS AND HAND CARRIED LUGGAGE	ALL	
CLASS	206	SPECIAL RECEPTACLE OR PACKAGE	ALL	
CLASS	215	BOTTLES AND JARS	ALL	
CLASS	217	WOODEN RECEPTACLES	ALL	
CLASS	220	RECEPTACLES	ALL	
CLASS	229	ENVELOPES, WRAPPERS AND PAPERBOARD BOXES	ALL	
CLASS	383	FLEXIBLE BAGS	ALL	
ART UNIT 242 -----				
CLASS	8	BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS	147	159
CLASS	15	BRUSHING, SCRUBBING AND GENERAL CLEANING	ALL	
CLASS	68	TEXTILES, FLUID TREATING APPARATUS	ALL	
CLASS	99	FOODS AND BEVERAGES: APPARATUS	ALL	
CLASS	100	PRESSES	ALL	
CLASS	134	CLEANING AND LIQUID CONTACT WITH SOLIDS	43 DIG. 1	201 DIG. 2
CLASS	226	ADVANCING MATERIAL OF INDETER- MINATE-LENGTH	ALL	
CLASS	366	AGITATING	ALL	

49

BEST COPY AVAILABLE

JUNF 1985

CLASSES ARRANGED BY ART UNIT

III-22

		CLASS TITLE	SUBCLASSES	
			FROM	TO
CLASS	494	IMPERFORATE BOWL, CENTRIFUGAL SEPARATORS	ALL	
ART UNIT 243				
CLASS	4	BATHS, CLOSETS, SINKS AND SPITTCONS	ALL	
CLASS	138	PIPES AND TUBULAR CONDUITS	ALL	
CLASS	141	FLUENT MATERIAL HANDLING, WITH RECEIVER OR RECEIVER CCACTING MEANS	ALL	
CLASS	200	ELFCTRICITY, CIRCUIT MAKERS AND BREAKERS	42A 51LM 62 153PS 181	49 51.17 79 165 340
CLASS	224	PACKAGE AND ARTICLE CARRIERS	ALL	
ART UNIT 245				
CLASS	57	TEXTILES, SPINNING, TWISTING AND TWINING	ALL	
CLASS	87	TEXTILES, BRAIDING, NETTING AND LACE MAKING	ALL	
CLASS	242	WINDING AND REELING	ALL	
CLASS	254	IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FOR	199 900 DIG. 11	417 903 DIG. 15
CLASS	308	MACHINE ELEMENTS, BEARINGS AND GUIDES	1A 36.7 DIG. 2	8.1 245 DIG. 15
CLASS	384	REARING OR GUIDES	ALL	
CLASS	464	ROTARY SHAFTS, GUDGEONS, HOUSINGS AND FLEXIBLE COUPLINGS FOR ROTARY SHAFTS	ALL	
ART UNIT 246				
CLASS	33	GEOMETRICAL INSTRUMENTS	ALL	
CLASS	73	MEASURING AND TESTING	73 150A 158 172 290B 426	77 150R 169 334 429
CLASS	116	SIGNALS AND INDICATORS	ALL	

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-23

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	277	JOINT PACKING	ALL	
CLASS	353	OPTICS, IMAGE PROJECTORS	ALL	
CLASS	369	DYNAMIC INFORMATION	33	42
		STORAGE OR	55	57
		RETRIEVAL	63	
			65	68
			71	75.2
			77.1	82
			96	
			98	99
			127	
			153	173
			176	274
			277	292
CLASS	374	THERMAL MEASURING AND TESTING	ALL	
ART UNIT 247				
CLASS	2	APPAREL	ALL	
CLASS	12	BOOT AND SHOE MAKING	ALL	
CLASS	19	TEXTILES, FIBER PREPARATION	ALL	
CLASS	26	TEXTILES, CLOTH FINISHING	ALL	
CLASS	28	TEXTILES, MANUFACTURING	ALL	
CLASS	36	BOOTS, SHOES AND LEGGINGS	ALL	
CLASS	38	TEXTILES, IRONING OR SMOOTHING	ALL	
CLASS	66	TEXTILES, KNITTING	ALL	
CLASS	69	LEATHER MANUFACTURES	ALL	
CLASS	112	SEWING	ALL	
CLASS	128	SURGERY	425	580
CLASS	139	TEXTILES, WEAVING	ALL	
CLASS	223	APPAREL APPARATUS	ALL	
CLASS	289	KNOTS AND KNOT TYING	ALL	
ART UNIT 251				
CLASS	307	ELECTRICAL TRANSMISSION OR INTER-CONNECTION SYSTEMS	425	430
CLASS	343	COMMUNICATIONS, RADIO WAVE	700MS DIG. 1	916 DIG. 2

JUNE 1985

III-24

CLASSES ARRANGED BY ART UNIT

CLASS TITLE			SUBCLASSES	
			FROM	TO
CLASS	350	OPTICS, SYSTEMS AND ELEMENTS	96.1	96.34
CLASS	372	COHERENT LIGHT GENERATORS	ALL	
ART UNIT 252				
CLASS	307	ELECTRICAL TRANSMISSION OR INTER- CONNECTION SYSTEMS	424	
CLASS	329	DEMODULATORS AND DETECTORS	ALL	
CLASS	330	AMPLIFIERS	1A 4.5	3 311
CLASS	331	OSCILLATORS	ALL	
CLASS	332	MODULATORS	1 8	7.5 68
CLASS	333	WAVE TRANSMISSION LINES AND NETWORKS	ALL	
CLASS	334	TUNERS	ALL	
ART UNIT 253				
CLASS	357	ACTIVE SOLID STATE DEVICES, E.G., TRANSISTORS, SOLID STATE DIODES	ALL	
ART UNIT 254				
CLASS	307	ELECTRICAL TRANSMISSION OR INTER- CONNECTION SYSTEMS	200A 350 440	325 364 608
CLASS	328	MISCELLANEOUS ELECTRON SPACE DISCHARGE DEVICE SYSTEMS	1 239	226 271
CLASS	377	ELECTRICAL PULSE COUNTERS, PULSE DIVIDERS OR SHIFT REGISTERS: CIRCUITS AND SYSTEMS	ALL	
ART UNIT 255				
CLASS	250	RADIANT ENERGY	200 548	239 578
CLASS	356	OPTICS, MEASURING AND TESTING	2 4.5 6 30 142 153	3 27 140 151 448
ART UNIT 256				
CLASS	250	RADIANT ENERGY	250	526

JUNE 1985

III-25

CLASSES ARRANGED BY ART UNIT

			SUPCLASSES	
			FROM	TC
CLASS	378	X-RAY OR GAMMA RAY SYSTEMS OR DEVICES	ALL	
ART UNIT 257				

CLASS	350	OPTICS, SYSTEMS AND ELEMENTS	1.1 6.1 97 130 266 DIG. 3	3.86 6.91 116 257 642
CLASS	351	OPTICS, EYE EXAMINING, VISION TESTING AND CORRECTING	ALL	
ART UNIT 261				

CLASS	178	TELEGRAPHY	1 23A 38 100	21 36 98 120
CLASS	179	TELEPHONY	1.1 2AM 6.3CC	5.5 190
CLASS	358	PICTORIAL COMMUNICATION; TELEVISION	84 209	86 224
CLASS	381	ELECTRICAL AUDIO SIGNAL PROCESSING AND SYSTEMS	1 54	28 124
ART UNIT 262				

CLASS	358	PICTORIAL COMMUNICATION; TELEVISION	1 87 125 225 245 260 305 901	83 113 208 243 258 295 905
ART UNIT 263				

CLASS	370	MULTIPLEX COMMUNICATIONS	ALL	
CLASS	375	PULSE OR DIGITAL COMMUNICATIONS	1 3	122
CLASS	455	TELECOMMUNICATIONS	1 31	25 620
ART UNIT 264				

CLASS	340	COMMUNICATIONS, ELECTRICAL	286M 348 700	346 407 825.98

JUNE 1985

III-26

CLASSES ARRANGED BY ART UNIT

CLASS TITLE			SUBCLASSES FROM TO	
CLASS	340	COMMUNICATIONS, ELECTRICAL	870.01	996
CLASS	367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES	197	199
ART UNIT 265				
CLASS	73	MEASURING AND TESTING	10C	10
			19	64.4
			66	
			78	132
			148	149
			151	157
			188	189
			335	338.6
			3826	383
			430	672
			760	860
			863	901
			DIG. 1	DIG. 11
ART UNIT 266				
CLASS	313	ELECTRIC LAMP AND DISCHARGE DEVICES	ALL	
CLASS	315	ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS	1	9
			32	363
			DIG. 1	DIG. 7
CLASS	326	MISCELLANEOUS ELECTRON SPACE DISCHARGE DEVICE SYSTEMS	227	238
CLASS	382	IMAGE ANALYSIS	ALL	
ART UNIT 267				
CLASS	324	ELECTRICITY, MEASURING AND TESTING	ALL	
ART UNIT 268				
CLASS	73	MEASURING AND TESTING	11	14
			65	
			146	147
			170A	171
			178H	187
			195	281
			379	381
			384	387
			700	756
			861	862.69
CLASS	340	COMMUNICATIONS, ELECTRICAL	19A	146
			500	696

54
BEST COPY AVAILABLE

JUNE 1985

III-27

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 367		COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES	93	94
ART UNIT 291				
CLASS D 2		APPAREL AND HABERDASHERY	234	
CLASS D 4		BRUSH WARE (1)	ALL	
CLASS D 6		FURNISHINGS	315 332 402 406 512	328 574
CLASS D 7		EQUIPMENT FOR PREPARING FOOD OR DRINK NOT ELSEWHERE SPECIFIED	323 331 362 402	324 351 375 408
CLASS D 8		TOOLS AND HARDWARE	1 19 44 51 58 105 DIG. 1	17 32 47 56 101 499 DIG. 10
CLASS D10		MEASURING, TESTING OR SIGNALLING INSTRUMENTS (1) (2)	104	121
CLASS D11		JEWELRY, SYMBOLIC INSIGNIA AND ORNAMENTS	130.1 143	156
CLASS D12		TRANSPORTATION (1)	ALL	
CLASS D13		EQUIPMENT FOR PRODUCTION, DISTRIBUTION OR TRANSFORMATION OF ELECTRICITY	ALL	
CLASS D14		RECORDING, COMMUNICATION OR INFORMATION RETRIEVAL EQUIPMENT	52 100	67 117
CLASS D15		MACHINES, NOT ELSEWHERE SPECIFIED	1 10 79	9 33 199
CLASS D16		PHOTOGRAPHY AND OPTICAL EQUIPMENT	100	137
CLASS D19		OFFICE SUPPLIES, ARTISTS "AND TEACHERS" MATERIALS	34.1	34.5
CLASS D20		SALES AND ADVERTISING EQUIPMENT	10 12 29	21 99

55

BEST COPY AVAILABLE

JUNE 1985

111-28

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	D21	GAMES, TOYS, AND SPORTS GOODS	228 236	231 239
CLASS	D22	ARMS, PYROTECHNICS, HUNTING, FISHING, AND TRAPPING EQUIPMENT	ALL	
CLASS	D23	FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, SOLID FUEL	ALL	
CLASS	D24	MEDICAL AND LABORATORY EQUIPMENT	ALL	
CLASS	D25	BUILDING UNITS AND CONSTRUCTION ELEMENTS	ALL	
CLASS	D26	LIGHTING	ALL	
CLASS	D27	TOBACCO AND SMOKERS SUPPLIES	ALL	
CLASS	D28	PHARMACEUTICAL, COSMETIC PRODUCTS, AND TOILET ARTICLES	1 63	3 64
CLASS	D29	DEVICES AND EQUIPMENT AGAINST FIRE HAZARDS, FOR ACCIDENT PREVENTION AND FOR RESCUE	ALL	
CLASS	D30	ANIMAL HUSBANDRY	ALL	
CLASS	D32	WASHING, CLEANING, OR DRYING MACHINE	ALL	
CLASS	D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT (1)	1	38
CLASS	D99	MISCELLANEOUS	17	24
ART UNIT 292				
CLASS	D 1	FOODSTUFFS	ALL	
CLASS	D 2	APPAREL AND HABERDASHERY	1 235	233 452
CLASS	D 3	TRAVEL GOODS AND PERSONAL BELONGINGS	ALL	
CLASS	D 6	FURNISHINGS	300 329 333 403 407 575	314 331 401 405 511 625

56
BEST COPY AVAILABLE

JUNE 1985

111-29

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	D 7	EQUIPMENT FOR PREPARING FOOD OR DRINK NOT ELSEWHERE SPECIFIED	1 325 352 376 409	322 330 361 401 415
CLASS	D 8	TOOLS AND HARDWARE	18 33 48 57 102	43 50 104
CLASS	D 9	PACKAGES AND CONTAINERS FOR GOODS (1)	ALL	
CLASS	D10	MEASURING, TESTING OR SIGNALLING INSTRUMENTS (1) (2)	1 122	103 132
CLASS	D11	JEWELRY, SYMBOLIC INSIGNIA AND ORNAMENTS	1 131 157	130 142 184
CLASS	D14	RECORDING, COMMUNICATION OR INFORMATION RETRIEVAL EQUIPMENT	1 68	39 99
CLASS	D15	MACHINES, NOT ELSEWHERE SPECIFIED	9.1 66	9.3 78
CLASS	D16	PHOTOGRAPHY AND OPTICAL EQUIPMENT	1	47
CLASS	D17	MUSICAL INSTRUMENTS	ALL	
CLASS	D18	PRINTING AND OFFICE MACHINERY	ALL	
CLASS	D19	OFFICE SUPPLIES, ARTISTS "AND TEACHERS" MATERIALS	1 35	34 100
CLASS	D20	SALES AND ADVERTISING EQUIPMENT	1 11 22	9 28
CLASS	D21	GAMES, TOYS, AND SPORTS GOODS	1 232 240	227 235 255
CLASS	D28	PHARMACEUTICAL, COSMETIC PRODUCTS, AND TOILET ARTICLES	4 64.1	62 99
CLASS	D33	EMBROIDERY AND TRIMMINGS	ALL	
CLASS	D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT (1)	39	46
CLASS	D47	KNITTING AND NETTING	ALL	

57

BEST COPY AVAILABLE

JUNE 1985

III-30

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	D59	PAPER MANUFACTURES	ALL	
CLASS	D64	PRINTING	ALL	
CLASS	D92	WEAVING, SHEET MATERIAL AND LINOLEUM	ALL	
CLASS	D99	MISCELLANEOUS	1 25	16 99
ART UNIT 311				
CLASS	133	COIN HANDLING	ALL	
CLASS	186	MERCHANDISING	ALL	
CLASS	187	ELEVATORS	1A 30 DIG. 1	28 98
CLASS	194	CHECK-CONTROLLED APPARATUS	ALL	
CLASS	221	ARTICLE DISPENSING	ALL	
CLASS	222	DISPENSING	ALL	
CLASS	258	RAILWAY MAIL DELIVERY	ALL	
CLASS	278	LAND VEHICLES, ANIMAL DRAFT APPLIANCES	ALL	
ART UNIT 312				
CLASS	104	RAILWAYS	ALL	
CLASS	105	RAILWAY ROLLING STOCK	ALL	
CLASS	152	RESILIENT TIRES AND WHEELS	1 323 375 DIG. 8 DIG. 10 DIG. 17	112 329 414
CLASS	191	ELECTRICITY, TRANSMISSION TO VEHICLES	ALL	
CLASS	209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS	3.1 44.1 509	3.3 44.3 942
CLASS	213	RAILWAY DRAFT APPLIANCES	ALL	
CLASS	238	RAILWAYS, SURFACE TRACK	ALL	
CLASS	246	RAILWAY SWITCHES AND SIGNALS	ALL	
CLASS	291	TRACK SANDERS	ALL	

58

BEST COPY AVAILABLE

JUNE 1985

CLASSES ARRANGED BY ART UNIT

III-31

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	293	VEHICLE FENDERS	ALL	
CLASS	295	RAILWAY WHEELS AND AXLES	ALL	
CLASS	296	LAND VEHICLES, BODIES AND TOPS	ALL	
CLASS	301	LAND VEHICLES, WHEELS AND AXLES	ALL	
CLASS	305	WHEEL SUBSTITUTES FOR LAND VEHICLES	ALL	
CLASS	410	FREIGHT ACCOMMODATION ON FREIGHT CARRIER	ALL	
ART UNIT 313				

CLASS	169	FIRE-EXTINGUISHERS	ALL	
CLASS	193	CONVEYERS, CHUTES, SKIDS, GUIDES AND WAYS	ALL	
CLASS	239	FLUID SPRINKLING, SPRAYING AND DIFFUSING	ALL	
CLASS	294	HANDLING, HAND AND HOIST-LINE IMPLEMENTS	ALL	
CLASS	406	CONVEYORS, FLUID CURRENT	ALL	
ART UNIT 314				

CLASS	188	BRAKES	ALL	
CLASS	267	SPRING DEVICES	ALL	
CLASS	271	SHEET FEEDING OR DELIVERING	ALL	
CLASS	303	FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS	ALL	
ART UNIT 315				

CLASS	114	SHIPS	1 26	19 381
CLASS	212	TRAVERSING HOISTS	ALL	
CLASS	244	AERONAUTICS	1TD 4A 15 DIG. 1	3 13 237 DIG. 2
CLASS	440	MARINE PROPULSION	ALL	
CLASS	441	BUOYS, RAFTS, AND AQUATIC DEVICES	ALL	

JUNE 1965

III-32

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
			FROM	TO
CLASS TITLE				
ART UNIT 316				

CLASS	180	MOTOR VEHICLES	ALL	
CLASS	280	LAND VEHICLES	ALL	
ART UNIT 317				

CLASS	198	CONVEYERS, POWER-DRIVEN	ALL	
CLASS	298	LAND VEHICLES, DUMPING	ALL	
CLASS	414	MATERIAL OR ARTICLE HANDLING	ALL	
CLASS	901	ROBOTS	ALL	
ART UNIT 321				

CLASS	10	BOLT, NAIL, NUT, RIVET AND SCREW MAKING	ALL	
CLASS	59	CHAIN, STAPLE AND HORSESHOE MAKING	ALL	
CLASS	72	METAL DEFORMING	ALL	
CLASS	82	TURNING	ALL	
CLASS	140	WIREWORKING	ALL	
CLASS	142	WOOD TURNING	ALL	
CLASS	144	WOODWORKING	ALL	
CLASS	407	CUTTERS, FOR SHAPING	ALL	
CLASS	413	SHEET METAL CONTAINER MAKING	ALL	
ART UNIT 322				

CLASS	29	METAL WORKING	560 650	568
CLASS	279	CHUCKS OR SOCKETS	ALL	
CLASS	339	ELECTRICAL CONNECTORS	ALL	
CLASS	408	CUTTING BY USE OF ROTATING AXIALLY MOVING TOOL	ALL	
CLASS	409	GEAR CUTTING, MILLING, OR PLANING	ALL	
ART UNIT 323				

CLASS	7	COMPOUND TOOLS	ALL	

60
BEST COPY AVAILABLE

JUNE 1985

III-33

CLASSES ARRANGED BY ART UNIT

			SUPCLASSES	
CLASS TITLE			FROM	TO
CLASS 30	CUTLERY		167	167.2
			308.1	308.3
			451	495
			501	525
CLASS 51	ABRADING		1	292
			310	439
			DIG. 1	DIG. 18
			DIG. 31	DIG. 34
CLASS 76	METAL TOOLS AND IMPLEMENTS, MAKING		ALL	
CLASS 81	TOOLS		ALL	
CLASS 125	STONE WORKING		ALL	
CLASS 157	WHEELWRIGHT MACHINES		ALL	
CLASS 254	IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FOR		1	134.7
			418	427
			DIG. 1	DIG. 10
			DIG. 16	
CLASS 269	WORK HOLDERS		ALL	
ART UNIT 324				
CLASS 16	MISCELLANEOUS HARDWARE		ALL	
CLASS 30	CUTLERY		1	166R
			168	308
			309	450
			500	
			DIG. 1	DIG. 8
CLASS 83	CUTTING		ALL	
CLASS 173	TOOL DRIVING OR IMPACTING		ALL	
CLASS 225	SEVERING BY TEARING OR BREAKING		ALL	
CLASS 234	SELECTIVE CUTTING (E.G., PUNCHING)		ALL	
ART UNIT 325				
CLASS 43	FISHING, TRAPPING AND VERMIN DESTROYING		ALL	
CLASS 164	METAL FOUNDED		ALL	
CLASS 228	METAL FUSION BONDING		2	5.7
			7	43
			44.5	
			45	48
			50	55
			56.5	172
			174	179
			181	904

61

BEST COPY AVAILABLE

JUNE 1985

III-34

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
			FROM	TO
CLASS	445	ELECTRIC LAMP OR SPACE DISCHARGE COMPONENT OR DEVICE MANUFACTURING	ALL	
ART UNIT 326				

CLASS	29	METAL WORKING	1A	1.32
			2.1	559
			592E	623
			631	
			700	729
			732	900
			DIG. 1	DIG.105
CLASS	79	BUTTON MAKING	ALL	
CLASS	147	COOPERING	ALL	
CLASS	163	NEEDLE AND PIN MAKING	ALL	
CLASS	241	SOLID MATERIAL COMMINUTION OR DISINTEGRATION	ALL	
CLASS	245	WIRE FABRICS AND STRUCTURE	ALL	
CLASS	300	BRUSH, BROOM AND MOP MAKING	ALL	
ART UNIT 327				

CLASS	17	BUTCHERING	ALL	
CLASS	53	PACKAGE MAKING	ALL	
CLASS	227	ELONGATED-MEMBER-DRIVING APPARATUS	ALL	
CLASS	281	BOOKS, STRIPS AND LEAVES	ALL	
CLASS	282	MANIFOLDING	ALL	
CLASS	283	PRINTED MATTER	ALL	
CLASS	402	BINDER DEVICE RELEASABLY ENGAGING APERTURE OR NOTCH OF SHEET	ALL	
CLASS	412	BOOKBINDING: PROCESS AND APPARATUS	ALL	
CLASS	493	MANUFACTURING CONTAINER OR TUBE FROM PAPER; OR OTHER MANUFACTURING FROM A SHEET A WEB	ALL	
ART UNIT 331				

CLASS	PLT	PLANTS	ALL	
CLASS	27	UNDERTAKING	ALL	

BEST COPY AVAILABLE

JUNE 1985

III-35

CLASSES ARRANGED BY ART UNIT

		CLASS TITLE	SUBCLASSES	
			FROM	TO
CLASS	47	PLANT HUSBANDRY	ALL	
CLASS	63	JEWELRY	ALL	
CLASS	111	PLANTING	ALL	
CLASS	124	MECHANICAL GUNS AND PROJECTORS	56	77
CLASS	135	TENTS, CANOPIES, UMBRELLAS AND CANES	ALL	
CLASS	171	UNEARTHING PLANTS OR BURIED OBJECTS	ALL	
CLASS	172	EARTH WORKING	ALL	
CLASS	231	WHIPS AND WHIP APPARATUS	ALL	
CLASS	272	AMUSEMENT AND EXERCISING DEVICES	1A 85	56.5R 92
CLASS	446	AMUSEMENT DEVICES, TOYS	1	
ART UNIT 332				
CLASS	3	ARTIFICIAL BODY MEMBERS	ALL	
CLASS	124	MECHANICAL GUNS AND PROJECTORS	1 78 DIG. 1	55 92
CLASS	128	SURGERY	8 24A 28	25R 78
CLASS	131	TOBACCO	ALL	
CLASS	132	TOILET	ALL	
CLASS	272	AMUSEMENT AND EXERCISING DEVICES	61 93 DIG. 1	78 902 DIG. 9
CLASS	401	COATING IMPLEMENTS WITH MATERIAL SUPPLY	ALL	
ART UNIT 333				
CLASS	6	BEE CULTURE	ALL	
CLASS	40	CARD, PICTURE AND SIGN EXHIBITING	ALL	
CLASS	54	HARNESS	ALL	
CLASS	56	HARVESTERS	ALL	
CLASS	119	ANIMAL HUSBANDRY	ALL	
CLASS	130	THRESHING	ALL	

63

BEST COPY AVAILABLE

JUNE 1985

111-36

CLASSES ARRANGED BY ART UNIT

		CLASS TITLE	SUBCLASSES FROM TO	
CLASS	168	FARRIERY	ALL	
CLASS	232	DEPOSIT AND COLLECTION RECEPTACLES	ALL	
CLASS	433	DENTISTRY	ALL	
CLASS	446	AMUSEMENT DEVICES, TOYS	2	901
ART UNIT 334				
CLASS	273	AMUSEMENT DEVICES, GAMES	ALL	
CLASS	434	EDUCATION, DEMONSTRATION, CRYPTOGRAPHY	11	433
ART UNIT 335				
CLASS	128	SURGERY	1A 9 21 200.11 303.1 362 630 DIG. 1	5 18 22 207.18 303.19 424 914 DIG. 27
ART UNIT 336				
CLASS	128	SURGERY	6 19 23 26 79 303A 304 581	7 20 171 303R 361 623
CLASS	604	SURGERY	ALL	
ART UNIT 337				
CLASS	37	EXCAVATING	ALL	
CLASS	101	PRINTING	ALL	
CLASS	192	TYPE CASTING	ALL	
CLASS	270	SHEET-MATERIAL ASSOCIATING	ALL	
CLASS	276	TYPE SETTING	ALL	
CLASS	400	TYPEWRITING MACHINES	ALL	
ART UNIT 341				
CLASS	60	POWER PLANTS	325 532	494 594

64

BEST COPY AVAILABLE

JUNE 1985

III-37

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS 91	MOTORS, EXPANSIBLE CHAMBER TYPE		1 508 DIG. 1	471 536 DIG. 4
CLASS 92	EXPANSIBLE CHAMBER DEVICES		ALL	
CLASS 415	ROTARY KINETIC FLUID MOTORS OR PUMPS		ALL	
CLASS 416	FLUID REACTION SURFACES (I.E., IMPELLERS)		ALL	
ART UNIT 342				
CLASS 60	POWER PLANTS		632	638
CLASS 123	INTERNAL-COMBUSTION ENGINES		1A 19 46SC 142.5E 250 567 DIG. 1	3 42 89 198R 558 671 DIG. 13
CLASS 362	ILLUMINATION		ALL	
ART UNIT 343				
CLASS 60	POWER PLANTS		39.01 39.64 221 722	39.59 204 271 917
CLASS 91	MOTORS, EXPANSIBLE CHAMBER TYPE		472	507
CLASS 184	LUBRICATION		ALL	
CLASS 417	PUMPS		ALL	
CLASS 418	ROTARY EXPANSIBLE CHAMBER DEVICES		ALL	
ART UNIT 344				
CLASS 34	DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS		ALL	
CLASS 62	REFRIGERATION		1 5 45 DIG. 1	3 7 531 DIG. 23
CLASS 98	VENTILATION		ALL	
CLASS 110	FURNACES		ALL	
CLASS 122	LIQUID HEATERS AND VAPORIZERS		ALL	

JUNE 1985

III-38

CLASSES ARRANGED BY ART UNIT

CLASS TITLE			SUBCLASSES FROM TO	
CLASS	236	AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION	ALL	
CLASS	237	HEATING SYSTEMS	ALL	
CLASS	432	HEATING	ALL	
ART UNIT 345 -----				
CLASS	126	STOVES AND FURNACES	ALL	
CLASS	251	VALVES AND VALVE ACTUATION	1A 205	156 280
CLASS	431	COMBUSTION	ALL	
ART UNIT 346 -----				
CLASS	60	POWER PLANTS	39.6 272 495 595 639	39.63 324 531 631 721
CLASS	123	INTERNAL-COMBUSTION ENGINES	18A 43AA 90.1 200 559	18R 45R 90.67 249 566
CLASS	165	HEAT EXCHANGE	ALL	
ART UNIT 347 -----				
CLASS	137	FLUID HANDLING	ALL	
CLASS	251	VALVES AND VALVE ACTUATION	157 281 DIG. 1	204 369 DIG. 5
ART UNIT 351 -----				
CLASS	256	FENCES	ALL	
CLASS	285	PIPE JOINTS OR COUPLINGS	ALL	
CLASS	403	JOINTS AND CONNECTIONS	ALL	
CLASS	405	HYDRAULIC AND EARTH ENGINEERING	ALL	
ART UNIT 352 -----				
CLASS	74	MACHINE ELEMENTS AND MECHANISMS	1SS 625 828 DIG. 1	500 812 879 DIG. 12

JUNE 1985

111-39

CLASSES ARRANGED BY ART UNIT

			SUBCLASSES	
CLASS TITLE			FROM	TO
CLASS	185	MOTORS, SPRING, WEIGHT AND ANIMAL POWERED	ALL	
CLASS	192	CLUTCHES AND POWER-STOP CONTROL	ALL	
ART UNIT 354				

CLASS	52	STATIC STRUCTURES, E.G., BUILDINGS	ALL	
ART UNIT 355				

CLASS	160	CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE	ALL	
CLASS	182	FIRE ESCAPES, LADDERS, SCAFFOLDS	ALL	
CLASS	211	SUPPORTS, RACKS	ALL	
CLASS	228	METAL FLUSION BONDING	1.1 6.1 44.3 44.7 49.1 56.1 173.1 180.1	6.2 49.4 56.3 173.7 180.2
CLASS	248	SUPPORTS	ALL	
ART UNIT 356				

CLASS	14	BRIDGES	ALL	
CLASS	166	WELLS	ALL	
CLASS	175	BORING OR PENETRATING THE EARTH	ALL	
CLASS	299	MINING OR IN SITU DISINTEGRATION OF HARD MATERIAL	ALL	
CLASS	404	ROAD STRUCTURE, PROCESS AND APPARATUS	ALL	
CLASS	474	ENDLESS BELT POWER TRANSMISSION SYSTEMS AND COMPONENTS	ALL	
ART UNIT 357				

CLASS	24	BUCKLES, BUTTONS, CLASPS, ETC.	ALL	
CLASS	49	MOVABLE OR REMOVABLE CLOSURES	ALL	
CLASS	108	HORIZONTALLY SUPPORTED PLANAR SURFACES	ALL	
CLASS	297	CHAIRS AND SEATS	ALL	
CLASS	312	SUPPORTS, CABINET STRUCTURES	ALL	

JUNE 1985

III-40

CLASSES ARRANGED BY ART UNIT

ART UNIT 358 -----		CLASS TITLE	SUBCLASSES	
			FROM	TO
	CLASS 5	BEDS	ALL	
	CLASS 70	LOCKS	ALL	
	CLASS 74	MACHINE ELEMENTS AND MECHANISMS	501M 813C	617 827
	CLASS 109	SAFES, BANK PROTECTION AND RELATED DEVICES	ALL	
	CLASS 292	CLOSURE FASTENERS	ALL	
	CLASS 411	EXPANDED, THREADED, HEADED, AND DRIVEN FASTENERS, OR LOCKED OR COUPLED BOLTS OR NUTS	ALL	

68

BEST COPY AVAILABLE

JUNE 1985

IV- 1

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUECLASSES FROM	TO	ART UNIT	SEARCH ROOM
D 1	FOODSTUFFS	ALL		292	4-10C06
D 2	APPAREL AND HABERDASHERY	1	233	292	4-10C06
		234		291	4-10C06
		235	452	292	4-10C06
D 3	TRAVEL GOODS AND PERSONAL BELONGINGS	ALL		292	4-10C06
D 4	BRUSH WARE (1)	ALL		291	4-10C06
D 6	FURNISHINGS	300	314	292	4-10C06
		315	328	291	4-10C06
		329	331	292	4-10C06
		332		291	4-10C06
		333	401	292	4-10C06
		402		291	4-10C06
		403	405	292	4-10C06
		406		291	4-10C06
		407	511	292	4-10C06
		512	574	291	4-10C06
		575	625	292	4-10C06
D 7	EQUIPMENT FOR PREPARING FOOD OR DRINK NOT ELSEWHERE SPECIFIED	1	322	292	4-10C06
		323	324	291	4-10C06
		325	330	292	4-10C06
		331	351	291	4-10C06
		352	361	292	4-10C06
		362	375	291	4-10C06
		376	401	292	4-10C06
		402	408	291	4-10C06
		409	415	292	4-10C06
D 8	TOOLS AND HARDWARE	1	17	291	4-10C06
		18		292	4-10C06
		19	32	291	4-10C06
		33	43	292	4-10C06
		44	47	291	4-10C06
		48	50	292	4-10C06
		51	56	291	4-10C06
		57		292	4-10C06
		58	101	291	4-10C06
		102	104	292	4-10C06
		105	459	291	4-10C06
		DIG. 1	DIG. 10	291	4-10C06
D 9	PACKAGES AND CONTAINERS FOR GOODS (1)	ALL		292	4-10C06
D10	MEASURING, TESTING OR SIGNALLING INSTRUMENTS (1) (2)	1	103	292	4-10C06
		104	121	291	4-10C06
		122	132	292	4-10C06
D11	JEWELRY, SYMBOLIC INSIGNIA AND ORNAMENTS	1	130	292	4-10C06
		130.1		291	4-10C06
		131	142	292	4-10C06
		143	156	291	4-10C06
		157	184	292	4-10C06

JUNE 1985

IV- 2

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
D12	TRANSPORTATION (1)	ALL		291	4-10C06
D13	EQUIPMENT FOR PRODUCTION, DISTRIBUTION OR TRANSFORMATION OF ELECTRICITY	ALL		291	4-10C06
D14	RECORDING, COMMUNICATION OR INFORMATION RETRIEVAL EQUIPMENT	1 52 68 100	39 67 99 117	292 291 292 291	4-10C06 4-10C06 4-10C06 4-10C06
D15	MACHINES, NOT ELSEWHERE SPECIFIED	1 9.1 10 66 79	9 9.3 33 78 199	291 292 291 292 291	4-10C06 4-10C06 4-10C06 4-10C06 4-10C06
D16	PHOTOGRAPHY AND OPTICAL EQUIPMENT	1 100	47 137	292 291	4-10C06 4-10C06
D17	MUSICAL INSTRUMENTS	ALL		292	4-10C06
D18	PRINTING AND OFFICE MACHINERY	ALL		292	4-10C06
D19	OFFICE SUPPLIES, ARTISTS "AND TEACHERS" MATERIALS	1 34.1 35	34 34.5 100	292 291 292	4-10C06 3- 3C34 4-10C06
D20	SALES AND ADVERTISING EQUIPMENT	1 10 11 12 22 29	9 21 28 99	292 291 292 291 292 291	4-10C06 4-10C06 4-10C06 4-10C06 4-10C06 4-10C06
D21	GAMES, TOYS, AND SPORTS GOODS	1 228 232 236 240	227 231 235 239 255	292 291 292 291 292	4-10C06 4-10C06 4-10C06 4-10C06 4-10C06
D22	ARMS, PYROTECHNICS, HUNTING, FISHING, AND TRAPPING EQUIPMENT	ALL		291	4-10C06
D23	FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, SOLID FUEL	ALL		291	4-10C06
D24	MEDICAL AND LABORATORY EQUIPMENT	ALL		291	4-10C06
D25	BUILDING UNITS AND CONSTRUCTION ELEMENTS	ALL		291	4-10C06
D26	LIGHTING	ALL		291	4-10C06
D27	TOBACCO AND SMOKERS SUPPLIES	ALL		291	4-10C06

JUNE 1985

IV- 3

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
D28	PHARMACEUTICAL, COSMETIC PRODUCTS, AND TOILET ARTICLES	1 4 63 64.1	3 62 64 99	291 292 291 292	4-10C06 4-10C06 4-10C06 4-10C06
D29	DEVICES AND EQUIPMENT AGAINST FIRE HAZARDS, FOR ACCIDENT PREVENTION AND FOR RESCUE	ALL		291	4-10C06
D30	ANIMAL HUSBANDRY	ALL		291	4-10C06
D32	WASHING, CLEANING, OR DRYING MACHINE	ALL		291	4-10C06
D33	EMBROIDERY AND TRIMMINGS	ALL		292	4-10C06
D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT (1)	1 39	38 46	291 292	4-10C06 4-10C06
D47	KNITTING AND NETTING	ALL		292	4-10C06
D59	PAPER MANUFACTURES	ALL		292	4-10C06
D64	PRINTING	ALL		292	4-10C06
D92	WEAVING, SHEET MATERIAL AND LINOLEUM	ALL		292	4-10C06
D99	MISCELLANEOUS	1 17 25	16 24 99	292 291 292	4-10C06 4-10C06 4-10C06
PLT	PLANTS	ALL		331	4- 4D33
2	APPAREL	ALL		247	4- 6D14
3	ARTIFICIAL BODY MEMBERS	ALL		332	4- 4D38
4	BATHS, CLOSETS, SINKS AND SPITTOONS	ALL		243	4- 6C18
5	BEDS	ALL		358	3- 3C06
6	BEE CULTURE	ALL		333	4- 4D38
7	COMPOUND TOOLS	ALL		323	3- 7C34
8	BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS	54.1C 116.1 116.4 127.1 127.5 147 160 181 405 426 DIG. 1	115.7 127 142 159 161 404 435 939 DIG. 21	157 144 157 144 157 242 125 157 125 157 157	2-10C15 3- 8D06 2-10C15 3- 8D06 2-10C15 4- 7D14 2- 8D18 2-10C15 2- 8D18 2-10C15 2-10C15

BEST COPY AVAILABLE

JUNE 1985

IV- 4

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM TO	ART UNIT	SEARCH ROOM
10	BOLT, NAIL, NUT, RIVET AND SCREW MAKING	ALL	321	3- 7C17
12	BOOT AND SHOE MAKING	ALL	247	4- 6C17
14	BRIDGES	ALL	356	3- 4C30
15	BRUSHING, SCRUBBING AND GENERAL CLEANING	ALL	242	4- 7D14
16	MISCELLANEOUS HARDWARE	ALL	324	3- 7C30
17	BUTCHERING	ALL	327	3- 6C12
19	TEXTILES, FIBER PREPARATION	ALL	247	4- 6D14
23	CHEMISTRY, ANALYTICAL AND PHYSICAL PROCESSES	ALL	134	3- 9C04
24	BUCKLES, BUTTONS, CLASPS, ETC.	ALL	357	3- 3C06
26	TEXTILES, CLOTH FINISHING	ALL	247	4- 6D14
27	UNDERTAKING	ALL	331	4- 4B33
28	TEXTILES, MANUFACTURING	ALL	247	4- 6D14
29	METAL WORKING	1A 1.32 2 2.1 559 560 568 569L 591 552E 623 623.1 623.5 631 650 700 729 730 731 732 900 DIG. 1 DIG.105	326 114 326 322 114 326 114 326 322 326 114 326 322 326 114 326 326	3- 7C23 3-10C24 3- 7C23 3- 7C23 3-10C32 3- 7C23 3-10C24 3- 7C23 3- 7C23 3- 7C23 3-10C24 3- 7C23 3- 7C23 3-10C24 3- 7C23 3- 7C23
30	CUTLERY	1 166R 167 167.2 168 308 308.1 308.3 309 450 451 455 500 501 525 DIG. 1 DIG. 8	324 323 324 323 324 323 324 323 324	3- 6D04 4- 5B07 3- 6D04 4- 5B07 3- 6D04 4- 5B07 3- 6D04 4- 5B07 3- 6D04
33	GEOMETRICAL INSTRUMENTS	ALL	246	4- 6C23
34	DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS	ALL	344	4- 3C33
36	BOOTS, SHOES AND LEGGINGS	ALL	247	4- 6C17

BEST COPY AVAILABLE

72

JUNE 1985

IV- 5

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
37	EXCAVATING	1	79	337	34- 3D53
		EOA	195	337	34- 3D59
		196	285	337	34- 3D53
		DIG. 1	DIG. 20	337	34- 3D59
38	TEXTILES, IRONING OR SMOOTHING	ALL		247	4- 6D14
40	CARD, PICTURE AND SIGN EXHIBITING	ALL		333	4- 4D10
42	FIREARMS	ALL		221	4-10D36
43	FISHING, TRAPPING AND VERMIN DESTROYING	ALL		325	3- 7C23
44	FUEL AND IGNITING DEVICES	1SR	6	116	3- 9E11
		7.1	7.7	223	4-10C16
		10A	48	116	3- 9E11
		EO	79	118	3- 9E11
		DIG. 1	DIG. 4	118	3- 9E11
47	PLANT HUSBANDRY	ALL		331	3- 3A03
48	GAS, HEATING AND ILLUMINATING	ALL		138	3- 8D06
49	MOVABLE OR REMOVABLE CLOSURES	ALL		357	3- 4C10
51	ABRADING	1	292	323	3- 7C30
		293	309	157	2-10C15
		310	439	323	3- 7C30
		DIG. 1	DIG. 18	323	3- 7C30
		DIG. 19	DIG. 30	157	2-10C15
		DIG. 31	DIG. 34	323	3- 7C30
52	STATIC STRUCTURES, E.G., BUILDINGS	ALL		354	34- 3D68
53	PACKAGE MAKING	ALL		327	3- 6D10
54	HARNESS	ALL		333	4- 4D38
55	GAS SEPARATION	ALL		135	3- 7C14
56	HARVESTERS	ALL		333	4- 4D10
57	TEXTILES, SPINNING, TWISTING AND TWINING	ALL		245	4- 7D36
59	CHAIN, STAPLE AND HORSESHOE MAKING	1	12	321	3- 7D16
		13	901	321	3- 6C12
60	POWER PLANTS	39.01	39.59	343	4- 3C10
		39.6	39.63	346	4- 3C18
		39.64	204	343	4- 3C10
		205	220	223	4-10C36
		221	271	343	4- 3C10
		272	324	346	4- 2C08
		325	454	341	4- 3D08
		455	531	346	4- 2C08
		532	594	341	4- 3D08

73

BEST COPY AVAILABLE

JUNE 1985

IV- 6

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
60	POWER PLANTS	555	631	346	4- 2C08
		632	638	342	4- 2C08
		639	721	346	4- 2C08
		722	902	343	4- 3C10
		903	917	343	4- 3D08
62	REFRIGERATION	1	3	344	4- 3C33
		4		133	3- 7C14
		5	7	344	4- 3C33
		9	44	133	3- 7C14
		45	531	344	4- 3C33
		532	545	133	3- 7C14
		DIG. 1	DIG. 23	344	4- 3C33
63	JEWELRY	ALL		331	3- 3A05
65	GLASS MANUFACTURING	ALL		133	3- 7C06
66	TEXTILES, KNITTING	ALL		247	4- 6D14
68	TEXTILES, FLUID TREATING APPARATUS	ALL		242	4- 7D14
69	LEATHER MANUFACTURES	ALL		247	4- 6C17
70	LOCKS	ALL		358	34- 3D68
71	CHEMISTRY, FERTILIZERS	1		118	3- 9E11
		3	4	129	2- 9C10
		5	64.13	118	3- 9E11
		65	128	129	2- 9C10
		900	904	118	3- 9E11
		DIG. 1		129	3- 9E11
		DIG. 2	DIG. 4	118	3- 9E11
72	METAL DEFORMING	1	342	321	3- 6C10
		343	711	321	3- 6C12
73	MEASURING AND TESTING	1DC	10	265	4- 6E13
		11	14	268	4- 6E13
		19	64.4	265	4- 6E13
		65		268	4- 6E13
		66		265	4- 6E13
		73	77	246	4- 6D34
		78	132	265	4- 6E13
		146	147	268	4- 6E13
		148	149	265	4- 6E13
		150A	150R	246	4- 6D34
		151	157	265	4- 6E13
		158	169	246	4- 6D34
		170A	171	268	4- 6E13
		172		246	4- 6D34
		178H	187	268	4- 6E13
		188	189	265	4- 6E13
		195	281	268	4- 6E13
		250B	334	246	4- 6D34
		335	338.6	265	4- 6E13
		379	381	268	4- 6E13
		382G	383	265	4- 6E13

BEST COPY AVAILABLE

JUNE 1985

IV- 7

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
73	MEASURING AND TESTING	3E4	387	268	4- 6E13
		426	429	246	4- 6D34
		430	672	265	4- 6E13
		700	756	268	4- 6E13
		760	860	265	4- 6E13
		861	862.69	268	4- 6E13
		863	901	265	4- 6E13
		DIG. 1	DIG. 11	265	4- 6F13
74	MACHINE ELEMENTS AND MECHANISMS	1SS	500	352	34- 3D70
		501M	617	358	34- 3D70
		625	812	352	34- 3D70
		813C	827	358	34- 3D70
		828	879	352	34- 3D70
		DIG. 1	DIG. 12	352	34- 3D70
75	METALLURGY	0.5AA	0.5R	111	3-10C24
		1R	2	113	3-10C24
		3	5	111	3-10C24
		6	9	113	3-10C24
		10A	83	111	3-10C24
		84	84.5	223	4-10C36
		85	96	111	3-10C24
		97A	121	113	3-10C24
		122.1		111	3-10C24
		122.5	122.7	223	4-10C36
		123AA	133.5	111	3-10C24
		228	250	223	4-10C36
		251	951	111	3-10C24
		DIG. 1		223	4-10C36
		DIG. 2		111	3-10C24
		DIG. 3		113	3-10C24
76	METAL TOOLS AND IMPLEMENTS, MAKING	ALL		323	3- 7C30
79	BUTTON MAKING	ALL		326	3- 7C17
81	TOOLS	2		323	3- 7C30
		3.0E	9.26	323	4- 5C05
		9.3		323	3- 7C30
		9.4	9.44	323	4- 5C05
		9.51	15.8	323	3- 7C30
		15.9	37	323	4- 5C05
		44	46	323	3- 7C30
		52		323	4- 5C05
		53.1		323	3- 7C30
		53.11	53.12	323	4- 5C05
		53.2	65	323	3- 7C30
		65.2	65.4	323	4- 5C05
		68	77	323	3- 7C30
		90.1	91.3	323	4- 5C05
		92	120	323	3- 7C30
		121.1		323	4- 5C05
		122	124.1	323	3- 7C30
		124.2	124.7	323	4- 5C05
		125	129	323	3- 7C30
		129.5		323	4- 5C05
		131	176	323	3- 7C30

95

BEST COPY AVAILABLE

JUNE 1985

IV- 8

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM TO	ART UNIT	SEARCH ROOM
81	TOOLS	176.1 177.75	323	4- 5C05
		177.8	323	3- 7C30
		177.85	323	4- 5C05
		177.9 179	323	3- 7C30
		180.1	323	4- 5C05
		181 185	323	3- 7C30
		185.1 185.2	323	4- 5C05
		186 409	323	3- 7C30
		409.5	323	4- 5C05
		411 424	323	3- 7C30
		424.5	323	4- 5C05
		426	323	3- 7C30
		426.5	323	4- 5C05
		427	323	3- 7C30
		427.5	323	4- 5C05
		429 483	323	3- 7C30
		484 492	323	4- 5C05
		900 901	323	3- 7C30
		DIG. 1 DIG. 12	323	3- 7C30
82	TURNING	ALL	321	3- 7D30
83	CUTTING	ALL	324	3- 6B15
84	MUSIC	1	211	4-10C06
		1.01 1.28	217	4- 9D32
		2 521	211	4-10C06
		DIG. 1 DIG. 30	217	4- 9D32
86	AMMUNITION AND EXPLOSIVE-CHARGE MAKING	ALL	223	4-10D36
87	TEXTILES, BRAIDING, NETTING AND LACE MAKING	ALL	245	4- 7D36
89	ORDNANCE	1.1 1.11	221	4-10C35
		1.12 1.13	221	4-10D36
		1.14	221	4-10C35
		1.15 1.35	221	4-10D36
		1.4 1.41	221	4-10C35
		1.42 1.819	221	4-10D36
		4.05 4.5	221	4-10C35
		5	221	4-10D36
		6 47	221	4-10C35
		125 129.02	221	4-10D36
		130 199	221	4-10C35
91	MOTORS, EXPANSIBLE CHAMBER TYPE	1 471	341	4- 3D08
		472 507	343	4- 3D08
		508 536	341	4- 3D08
		DIG. 1 DIG. 4	341	4- 3D08
92	EXPANSIBLE CHAMBER DEVICES	ALL	341	4- 3C10
98	VENTILATION	ALL	344	4- 3C33
99	FOODS AND BEVERAGES: APPARATUS	ALL	242	4- 7D14

JUNE 1985

IV- 9

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
100	PRESSES	ALL		242	4- 7D14
101	PRINTING	ALL		337	34- 3D48
102	AMMUNITION AND EXPLOSIVES	200	282	221	4-10D36
		2E3	292	223	4-10D36
		2F3		221	4-10D36
		3C1	361	223	4-10D36
		3E2	705	221	4-10D36
104	RAILWAYS	ALL		312	3- 4E09
105	RAILWAY ROLLING STOCK	ALL		312	3- 4C23
106	COMPOSITIONS, COATING OR PLASTIC	1.0E	38.4	157	2-11D--
		38.51		143	3- 8D04
		38.6	38.9	157	2-11D--
		74	108	118	3- 9C32
		109	116	113	3- 9C32
		117	121	118	3- 9C32
		122		157	2-11D--
		123.1	123.2	142	3- 8D04
		124	172	157	2-11D--
		173.1		142	3- 8D04
		174	196	157	2-11D--
		197.1	197.2	142	3- 8D04
		198	311	157	2-11D--
		312	315	118	3- 9C32
		316	901	157	2-11D--
		DIG. 1	DIG. 6	118	3- 9C32
		DIG. 7		157	2-11D--
		DIG. 8		118	3- 9C32
108	HORIZONTALLY SUPPORTED PLANAR SURFACES	ALL		357	3- 4C24
109	SAFES, BANK PROTECTION AND RELATED DEVICES	ALL		358	34- 3D68
110	FURNACES	ALL		344	4- 3C33
111	PLANTING	ALL		331	3- 3A03
112	SEWING	ALL		247	4- 6D14
114	SHIPS	1	19	315	3- 6C04
		20A	25	221	4-10D36
		26	381	315	3- 6C04
116	SIGNALS AND INDICATORS	ALL		246	4- 6C23
118	COATING APPARATUS	ALL		152	2-11D--
119	ANIMAL HUSBANDRY	ALL		333	4- 4D10
122	LIQUID HEATERS AND VAPORIZERS	1A	359	344	4- 3C38
		3E0	512	344	4- 3C33
		DIG. 1	DIG. 16	344	4- 3C38

97

BEST COPY AVAILABLE

JUNE 1985

IV-10

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
123	INTERNAL-COMBUSTION ENGINES	1A	3	342	4- 2C08
		18A	18R	346	4- 2C08
		19	42	342	4- 2C08
		43AA	45R	346	4- 2C08
		46SC	89	342	4- 2C08
		90.1	90.67	346	4- 2C08
		142.5E	198R	342	4- 2C08
		200	249	346	4- 2C08
		250	558	342	4- 2C08
		559	566	346	4- 2C08
		567	671	342	4- 2C08
		DIG. 1	DIG. 13	342	4- 2C08
124	MECHANICAL GUNS AND PROJECTORS	1	55	332	4- 4D38
		56	77	331	4- 4D38
		78	92	332	4- 4D38
		DIG. 1		332	4- 4D38
125	STONE WORKING	ALL		323	3- 7C30
126	STOVES AND FURNACES	ALL		345	4- 3C38
127	SUGAR, STARCH AND CARBOHYDRATES	ALL		136	3- 8B17
128	SURGERY	1A	5	335	4- 4C34
		6	7	336	4- 4C34
		8		332	4- 4C34
		9	18	335	4- 4C34
		19	20	336	4- 4C34
		21	22	335	4- 4C34
		23		336	4- 4C34
		24A	25R	332	4- 4C34
		26		336	4- 4C34
		28	78	332	4- 4C34
		79	171	336	4- 4C34
		200.11	207.18	335	4- 4C34
		303A	303R	336	4- 4C34
		303.1	303.19	335	4- 4C34
		304	361	336	4- 4C34
		362	424	335	4- 4C34
		425	580	247	4- 6D14
		581	623	336	4- 4C34
		630	914	335	4- 4C34
		DIG. 1	DIG. 27	335	4- 4C34
130	THRASHING	ALL		333	4- 4C10
131	TOBACCO	ALL		332	4- 4D38
132	TOILET	ALL		332	4- 4D38
133	COIN HANDLING	ALL		311	3- 5C05
134	CLEANING AND LIQUID CONTACT WITH SOLIDS	1	42	136	3- 7C06
		43	201	242	4- 6C18
		DIG. 1	DIG. 2	242	4- 6C18

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

[illegible]

JUNE 1985

IV-12

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM		
		FROM	TO				
148	METAL TREATMENT	DIG.129	DIG.131	114	3-10C32		
		DIG.132		114	3-10E16		
		DIG.133	DIG.139	114	3-10C32		
		DIG.140		114	3-10E16		
		DIG.141	DIG.152	114	3-10C32		
		DIG.153		114	3-10E16		
		DIG.154	DIG.164	114	3-10C32		
		DIG.165		114	3-10E16		
		DIG.166	DIG.174	114	3-10C32		
149	EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES	ALL		223	4-10C16		
150	PURSES, WALLETS, AND PROTECTIVE COVERS	48	55	241	4- 6C10		
		100	900	241	34- 3C48		
152	RESILIENT TIRES AND WHEELS	1	112	312	3- 4D10		
		151	322	131	3- 7C14		
		323	329	312	3- 4D10		
		321.1	373	131	3- 7C14		
		375	414	312	3- 4D10		
		415	565	131	3- 7C14		
		DIG. 1	DIG. 7	131	3- 7C14		
		DIG. 8		312	3- 4D10		
		DIG. 9		131	3- 7C14		
		DIG. 10		312	3- 4D10		
		DIG. 11	DIG. 16	131	3- 7C14		
		DIG. 17		312	3- 4D10		
		DIG. 18	DIG. 19	131	3- 7C14		
		156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE	1	79	131	3- 7C14
				80	89	138	3- 7C14
90	144			131	3- 7C14		
145	147			138	3- 7C14		
148	241			131	3- 7C14		
242	271			138	3- 7C14		
272.2	509			131	3- 7C14		
510	522			138	3- 7C14		
523	529			131	3- 7C14		
530	536			138	3- 7C14		
537	598			131	3- 7C14		
600	624			134	3- 9C04		
625	909			131	3- 7C14		
910				131	3- 6C12		
DIG. 1	DIG. 51			131	3- 7C14		
DIG. 61	DIG. 114			134	3- 9C04		
157	WHEELWRIGHT MACHINES			ALL		323	3- 7C34
159	CONCENTRATING EVAPORATORS			1.1		177	3- 5C34
		2.1	3	133	3- 7C14		
		4.01	4.4	177	3- 5C34		
		5	12	133	3- 7C14		
		13.1	13.4	177	3- 5D35		
		14	15	133	3- 7C14		
		16.1	16.3	177	3- 5C34		
		17.1	24.3	133	3- 7C14		
		25.1	25.2	177	3- 5C34		

80

BEST COPY AVAILABLE

JUNE 1985

IV-13

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
159	CONCENTRATING EVAPORATORS	26.1	49	133	3- 7C14
		900	906	177	3- 5C34
		DIG. 1	DIG. 42	133	3- 7C14
160	CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE	ALL		355	3- 4C24
162	PAPER MAKING AND FIBER LIBERATION	1	359	133	3- 7C06
		360.1		173	3- 5B09
		361	416	133	3- 7C06
		DIG. 1	DIG. 12	133	3- 7C06
163	NEEDLE AND PIN MAKING	ALL		326	3- 7C17
164	METAL FOUNDRY	ALL		325	3- 7D04
165	HEAT EXCHANGE	ALL		346	4- 2C08
166	WELLS	ALL		356	3- 4C30
168	FARRIERY	ALL		333	4- 4D38
169	FIRE-EXTINGUISHERS	ALL		313	3- 5D10
171	UNEARTHING PLANTS OR BURIED OBJECTS	ALL		331	34- 3D68
172	EARTH WORKING	ALL		331	34- 3D68
173	TOOL DRIVING OR IMPACTING	ALL		324	3- 7C30
174	ELECTRICITY, CONDUCTORS AND INSULATORS	ALL		215	4- 9D12
175	BORING OR PENETRATING THE EARTH	ALL		356	3- 4C30
177	WEIGHING SCALES	ALL		216	4- 8D04
178	TELEGRAPHY	1	21	261	4- 5C08
		22.01	22.19	222	4-10C35
		23A	36	261	4- 5C08
		37		222	4-10C35
		38	98	261	4- 5C08
		99		222	4-10C35
		100	120	261	4- 5C08
179	TELEPHONY	1.1		261	4- 5C08
		1.5FS	1.5S	222	4-10C36
		2AM	5.5	261	4- 5C08
		6.01	6.2	235	4-11D06
		6.3CC	190	261	4- 5C08
180	MOTOR VEHICLES	2.1	70.1	316	3- 5E09
		71	90.6	316	3- 5C34
		116	130	316	3- 5E09
		131	163	316	3- 5C34
		164	310	316	3- 5E09
		311	908	316	3- 5C34

JUNE 1985

IV-14

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
181	ACOUSTICS	0.5		221	4-10C36
		18	30	211	4- 9B31
		101	125	221	4-10C36
		126	138	211	4- 9B31
		139	140	221	4-10C36
		141		211	4- 9B31
		142		221	4-10C36
		143	296	211	4- 9B31
		400	402	221	4-10C36
		403	404	211	4- 9B31
182	FIRE ESCAPES, LADDERS, SCAFFOLDS	ALL		355	3- 4C24
184	LUBRICATION	ALL		343	4- 3C33
185	MOTORS, SPRING, WEIGHT AND ANIMAL POWERED	ALL		352	34- 3D70
186	MERCHANDISING	ALL		311	3- 5D10
187	ELEVATORS	1A	28	311	3- 5D10
		29AB	29Y	217	4- 9D32
		30	98	311	3- 5D10
		DIG. 1		311	3- 5D10
188	BRAKES	ALL		314	3- 5C08
190	TRUNKS AND HAND CARRIED LUGGAGE	1	902	241	4- 6C10
		903		241	34- 3D48
191	ELECTRICITY, TRANSMISSION TO VEHICLES	ALL		312	3- 4C23
192	CLUTCHES AND POWER-STOP CONTROL	ALL		352	3- 4C10
193	CONVEYERS, CHUTES, SKIDS, GUIDES AND WAYS	ALL		313	3- 5D10
194	CHECK-CONTROLLED APPARATUS	ALL		311	3- 5D10
196	MINERAL OILS: APPARATUS	ALL		138	3- 9C04
198	CONVEYERS, POWER-DRIVEN	ALL		317	3- 4D30
199	TYPE CASTING	ALL		337	34- 3D45
200	ELECTRICITY, CIRCUIT MAKERS AND BREAKERS	1TK	41	214	4- 8B03
		42A	49	243	4- 6C24
		50AA	50R	214	4- 8B03
		51LM	51.17	243	4- 6C24
		52A	61.93	214	4- 8B03
		62	79	243	4- 6C24
		80A	151	214	4- 8B03
		153HS	165	243	4- 6C24
		175	180	214	4- 8B03
		181	340	243	4- 6C24
		DIG. 1	DIG. 47	214	4- 8B03

BEST COPY AVAILABLE

JUNE 1985

IV-15

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
201	DISTILLATION: PROCESSES, THERMOLYTIC	ALL		138	3- 8D06
202	DISTILLATION: APPARATUS	81	151	138	3- 8D06
		152	209	133	3- 8D06
		210	230	138	3- 8D06
		232	238	133	3- 8D06
		239	270	138	3- 8D06
		DIG. 1		133	3- 8D06
203	DISTILLATION: PROCESSES, SEPARATORY	ALL		133	3- 7C14
204	CHEMISTRY, ELECTRICAL AND WAVE ENERGY	1R	1T	112	3- 9C32
		1.5		223	4-10C16
		2	37.6	112	3- 9C32
		38.1	38.7	112	3-10B02
		39	42	112	3- 9C32
		43.1		112	3-10B02
		44		112	3- 9C32
		44.2	45.1	112	3-10B02
		45.5	55Y	112	3- 9C32
		55.5		112	3-10B02
		56M	159	112	3- 9C32
		159.11	160.1	151	2-10C15
		161	163S	223	4-10C16
		164	435	112	3- 9C32
		DIG. 1	DIG. 13	112	3- 9C32
206	SPECIAL RECEPTACLE OR PACKAGE	0.5	37	241	4- 6C10
		37.1	37.8	241	34- 3D48
		38		241	4- 6C10
		38.1		241	34- 3D48
		39	830	241	4- 6C10
		831		241	34- 3D48
208	MINERAL OILS: PROCESSES AND PRODUCTS	ALL		116	3- 9D06
209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS	1	3	135	3- 8D12
		3.1	3.3	312	3- 4D10
		4	44	135	3- 8D12
		44.1	44.3	312	3- 4D10
		45	70	135	3- 8D12
		127.1	127.4	177	3- 5D10
		128	508	135	3- 8D12
		509	942	312	3- 4D10
210	LIQUID PURIFICATION OR SEPARATION	85	320	136	3- 8B17
		321.1	321.5	134	3- 8B17
		322	500.1	136	3- 8B17
		500.2		134	3- 8B17
		501	633	136	3- 8B17
		634	655	134	3- 8B17
		656	928	136	3- 8B17
		929		134	3- 8B17
		DIG. 3	DIG. 17	136	3- 8B17

83

BEST COPY AVAILABLE

JUNE 1985

IV-16

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
211	SUPPORTS, RACKS	1	48	355	3- 4C24
		49.1		355	3- 4B33
		50	59.1	355	3- 4C24
		59.2	60.1	355	3- 4B33
		61	70	355	3- 4C24
		70.1	70.8	355	3- 4B33
		71	209	355	3- 4C24
		DIG. 1		355	3- 4C24
212	TRAVERSING HOISTS	ALL		315	3- 6B07
213	RAILWAY DRAFT APPLIANCES	ALL		312	3- 4D10
215	BOTTLES AND JARS	ALL		241	4- 6C10
217	WOODEN RECEPTACLES	ALL		241	4- 6C10
219	ELECTRIC HEATING	ALL		213	4- 9D04
220	RECEPTACLES	18C	902	241	4- 6C10
		903		241	34- 3D48
		DIG. 1	DIG. 33	241	4- 6C10
221	ARTICLE DISPENSING	ALL		311	3- 5D10
222	DISPENSING	1	145	311	3- 5C08
		146.1	146.6	311	4- 7B15
		147	652	311	3- 5C08
		DIG. 1		311	3- 5C08
223	APPAREL APPARATUS	ALL		247	4- 6D14
224	PACKAGE AND ARTICLE CARRIERS	ALL		243	4- 6C24
225	SEVERING BY TEARING OR BREAKING	ALL		324	3- 6D04
226	ADVANCING MATERIAL OF INDETER- MINATE-LENGTH	ALL		242	4- 7D14
227	ELONGATED-MEMBER-DRIVING APPARATUS	ALL		327	3- 6D10
228	METAL FUSION BONDING	1.1		355	3- 4B33
		2	5.7	325	3- 7D04
		6.1	6.2	355	3- 4B33
		7	43	325	3- 7D04
		44.3		355	3- 4B33
		44.5		325	3- 7D04
		44.7		355	3- 4B33
		45	48	325	3- 7D04
		49.1	49.4	355	3- 4B33
		50	55	325	3- 7D04
		56.1	56.3	355	3- 4B33
		56.5	172	325	3- 7D04
		173.1	173.7	355	3- 4B33
		174	179	325	3- 7D04
		180.1	180.2	355	3- 4B33
		181	904	325	3- 7D04

84
BEST COPY AVAILABLE

JUNE 1985

IV-17

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
229	ENVELOPES, WRAPPERS AND PAPERBOARD BOXES	ALL		241	4- 6C10
231	WHIPS AND WHIP APPARATUS	ALL		331	34- 3D68
232	DEPOSIT AND COLLECTION RECEPTACLES	ALL		333	4- 4D38
234	SELECTIVE CUTTING (E.G., PUNCHING)	ALL		324	3- 6D04
235	REGISTERS	1A 310 375 400 419	201R 311 386 418 495	211 217 233 234 233	4- 9B09 4- 9D04 4-11C30 4-11C30 4-11C30
236	AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION	ALL		344	4- 3C33
237	HEATING SYSTEMS	ALL		344	4- 3C33
238	RAILWAYS, SURFACE TRACK	ALL		312	3- 4C23
239	FLUID SPRINKLING, SPRAYING AND DIFFUSING	1 177.1 178 DIG. 1	176 177.2 721 DIG. 23	313 313 313 313	3- 5D10 4- 6C04 3- 5D10 3- 5D10
241	SOLID MATERIAL COMMINUTION OR DISINTEGRATION	ALL		326	3- 7D30
242	WINDING AND REELING	ALL		245	4- 7D36
244	AERONAUTICS	1TD 3.1 4A 14 15 DIG. 1	3 3.3 13 237 2 2	315 221 315 221 315 315	3- 6C04 4-10C35 3- 6C04 4-10C35 3- 6C04 3- 6C04
245	WIRE FABRICS AND STRUCTURE	1, 8	7 11	326 326	3- 7C17 3- 6D10
246	RAILWAY SWITCHES AND SIGNALS	ALL		312	3- 4C23
248	SUPPORTS	ALL		355	3- 4C24
249	STATIC MOLDS	ALL		138	3- 8D06
250	RADIANT ENERGY	200 250 548	239 526 578	255 256 255	4- 8D04 4- 8C34 4- 8D04
251	VALVES AND VALVE ACTUATION	1A 1E7 205 281 DIG. 1	156 204 280 369 DIG. 5	345 347 345 347 347	34- 3D48 34- 3D48 34- 3D48 34- 3D48 34- 3D48

85-

BEST COPY AVAILABLE

JUNE 1985

IV-18

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM		
		FROM	TO				
252	COMPOSITIONS	1	8.55R	223	4-10C16		
		8.57	8.9	157	2-10C15		
		9	58	118	3- 9C07		
		60	62	157	2-10C15		
		62.2	62.9	113	3- 9C07		
		67	79	157	2-10C15		
		79.1	79.5	131	3- 7C14		
		80	181	157	2-10C15		
		181.1	299.7	223	4-10C16		
		301.16	301.36	112	3- 9C03		
		301.4F	301.6S	113	3- 9C07		
		302	366	223	4-10C16		
		367	370	157	2-10C15		
		371		138	3- 9C04		
		372	377	126	2- 9C10		
		378P	378R	113	3- 9C32		
		380	385	223	4-10C16		
		386		118	3- 9E11		
		387	478	223	4-10C16		
		492		116	3-10C04		
		500	521	157	2-10C15		
		522A	522R	124	2- 8C13		
		523	581	157	2-10C15		
		582	700	223	4-10C16		
		950	951	113	3- 9D06		
		960	965	223	4-10C16		
		DIG. 1	DIG. 17	157	2-10C15		
		DIG. 18		116	3-10C04		
		DIG. 19		157	2-10C15		
		254	IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FOR	1	134.7	323	3- 7C34
				159	417	245	4- 7C34
				418	427	323	3- 7C34
				900	903	245	4- 7C34
DIG. 1	DIG. 10			323	3- 7C34		
DIG. 11	DIG. 15			245	3- 7C34		
DIG. 16				323	3- 7C34		
256	FENCES	ALL		351	3- 4A12		
258	RAILWAY MAIL DELIVERY	ALL		311	3- 5C05		
260	CHEMISTRY, CARBON COMPOUNDS	1		121	2- 8C14		
		96.5C	96.5T	116	3- 9C03		
		97	112T	153	2-10C15		
		112.5LH	112.5T	123	2- 8A10		
		112.7		125	2- 8C14		
		113	123.7	153	2-10C15		
		239AA	239EQ	122	2- 8C14		
		239HM		129	2- 8C14		
		239A	239B	122	2- 8C14		
		239D		129	2- 8C14		
		239E		122	2- 8C14		
		239R		129	2- 8C14		
		239.1		126	2- 8C14		
		239.3A	239.3T	129	2- 8C14		
		239.5	239.57	125	2- 8C14		
		239.6	239.95	121	2- 8C14		

86

BEST COPY AVAILABLE

JUNE 1985

IV-19

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
260	CHEMISTRY, CARBON COMPOUNDS	242.2		129	2- 8C14
		243.3	244.4	122	2- 8C14
		245.1		129	2- 8C14
		245.2R	245.4	122	2- 8C14
		245.5	245.6	129	2- 8C14
		245.7		122	2- 8C14
		245.71	245.91	129	2- 8C14
		330	330.3	121	2- 8C14
		330.6	330.9	129	2- 8C14
		349		121	2- 8C14
		350L	350R	126	2- 8C14
		351	396R	129	2- 8C14
		357	397.5	125	2- 8C14
		357.6	397.7R	121	2- 8C14
		358	428.5	124	2- 8C14
		453AR	453AL	123	2- 8C14
		453AM	453.3	121	2- 8C14
		453.4	453.6	126	2- 8C14
		453.7	453.8	121	2- 8C14
		453.9		126	2- 8C14
		453.95	455R	121	2- 8C14
		456NS	460	123	2- 8C14
		462A	462R	124	2- 8C14
		463		122	2- 8C14
		464		121	2- 8C14
		465B	465R	123	2- 8C14
		465.1	465.9	121	2- 8C14
		466	467	223	4-10C16
		500.5F	500.5R	126	2- 8C14
		501.1	501.21	129	2- 8C14
		502A	502R	126	2- 8C14
		502.3		124	2- 8D18
		502.4A	502.5R	126	2- 8C14
		502.6	513.7	123	2- 8C14
		543PN	549	126	2- 8C14
		550		122	2- 8C14
		665B	665R	124	2- 8D18
		684	708	121	2- 8C14
		920	990	124	2- 8C14
		998.11	998.19	151	2-10C15
		016. 14	016. 41	155	2-10C15
		016. 42		116	2-10C15
		016. 43		155	2-10C15
		016. 44		121	2-10C15
		016. 45	016. 47	155	2-10C15
261	GAS AND LIQUID CONTACT APPARATUS	ALL		135	3- 8D34
264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES	0.5		223	4-10C16
		1.1	2.7	137	3- 8D06
		3A	3R	223	4-10C16
		4		137	3- 8D06
		4.1	4.7	223	4-10C16
		5	574	137	3- 8D06
		016. 1	016. 84	137	3- 8D06
266	METALLURGICAL APPARATUS	44	100	111	3-10C24
		101		113	3-10C24

87

BEST COPY AVAILABLE

JUNE 1985

IV-20

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM TO		ART UNIT	SEARCH ROOM
266	METALLURGICAL APPARATUS-	102	169	111	3-10C24
		170		113	3-10C24
		171	905	111	3-10C24
267	SPRING DEVICES	ALL		314	3- 5C08
269	WORK HOLDERS	ALL		323	3- 7C34
270	SHEET-MATERIAL ASSOCIATING	ALL		337	34- 3D48
271	SHEET FEEDING OR DELIVERING	1	7	314	3- 5C08
		8.1		314	4- 6C07
		9	25	314	3- 5C08
		20.1		314	4- 6C07
		21		314	3- 5C08
		21.1		314	4- 6C07
		33	315	314	3- 5C08
		900	903	314	4- 6C07
272	AMUSEMENT AND EXERCISING DEVICES	1A	56.5R	331	34- 3D68
		E1	78	332	4- 4D38
		E5	92	331	34- 3D68
		E3	902	332	4- 4D38
		DIG. 1	DIG. 9	332	4- 4D38
273	AMUSEMENT DEVICES, GAMES	ALL		334	4- 4C10
276	TYPE SETTING	ALL		337	34- 3D45
277	JOINT PACKING	ALL		246	4- 6C23
278	LAND VEHICLES, ANIMAL DRAFT APPLIANCES	ALL		311	3- 5C05
279	CHUCKS OR SOCKETS	ALL		322	3- 6D10
280	LAND VEHICLES	ALL		316	3- 5C34
281	BOOKS, STRIPS AND LEAVES	ALL		327	3- 7D04
282	MANIFOLDING	ALL		327	3- 6D10
283	PRINTED MATTER	ALL		327	3- 7D04
285	PIPE JOINTS OR COUPLINGS	ALL		351	3- 4C10
289	KNOTS AND KNOT TYING	ALL		247	4- 6D14
290	PRIME-MOVER DYNAMO PLANTS	ALL		217	4- 9D32
291	TRACK SANDERS	ALL		312	3- 4C17
292	CLOSURE FASTENERS	ALL		358	34- 3D68
293	VEHICLE FENDERS	ALL		312	3- 4D10
294	HANDLING, HAND AND HOIST-LINE IMPLEMENTS	1.1	1.5	313	4- 6C07
		2	18	313	3- 5D10

JUNE 1985

IV-21

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
294	HANDLING, HAND AND HOIST-LINE IMPLEMENTS	19.1	19.3	313	4- 6C07
		22	26.5	313	3- 5D10
		27.1		313	4- 6C07
		28	30	313	3- 5D10
		31.1		313	4- 6C07
		31.2	62	313	3- 5D10
		63.1	64.3	313	4- 6C07
		65	65.5	313	3- 5D10
		66.1	68.3	313	4- 6C07
		74	80	313	3- 5D10
		81.1	82.36	313	4- 6C07
		85	86.34	313	3- 5D10
		86.4	87.12	313	4- 6C07
		87.2	98	313	3- 5D10
		98.1	99.2	313	4- 6C07
		100	101	313	3- 5D10
		102.1	103.2	313	4- 6C07
		104	109	313	3- 5D10
		110.1	110.2	313	4- 6C07
		111	119	313	3- 5D10
		119.1	119.4	313	4- 6C07
		120	172	313	3- 5D10
		901	907	313	4- 6C07
295	RAILWAY WHEELS AND AXLES	ALL		312	3- 4C17
296	LAND VEHICLES, BODIES AND TOPS	ALL		312	3- 4D10
297	CHAIRS AND SEATS	ALL		357	3- 4C24
298	LAND VEHICLES, DUMPING	ALL		317	3- 5C07
299	MINING OR IN SITU DISINTEGRATION OF HARD MATERIAL	ALL		356	3- 4C30
300	BRUSH, BROOM AND MOP MAKING	ALL		326	3- 7C17
301	LAND VEHICLES, WHEELS AND AXLES	ALL		312	3- 4D10
303	FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS	ALL		314	3- 5C08
305	WHEEL SUBSTITUTES FOR LAND VEHICLES	ALL		312	3- 4D10
307	ELECTRICAL TRANSMISSION OR INTER- CONNECTION SYSTEMS	1	108	214	4- 8B03
		109	110	212	4- 8B03
		111	157	214	4- 8B03
		200A	325	254	4- 7C34
		326	328	214	4- 8B03
		350	364	254	4- 7C34
		400	423	214	4- 8B03
		424		252	4- 7C34
		425	430	251	4- 7C34
		440	608	254	4- 7C34
308	MACHINE ELEMENTS, BEARINGS AND GUIDES	1A	8.1	245	4- 7D36
		10		212	4- 9C08
		36.7	245	245	4- 7D36

JUNE 1985

IV-22

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
308	MACHINE ELEMENTS, BEARINGS AND GUIDES	DIG. 2	DIG. 15	245	4- 7D36
310	ELECTRICAL GENERATOR OR MOTOR STRUCTURE	1	300	212	4- 9C08
		301	305	222	4-10C36
		306	800	212	4- 9C08
		DIG. 2	DIG. 6	212	4- 9C08
312	SUPPORTS, CABINET STRUCTURES	ALL		357	3- 4C24
313	ELECTRIC LAMP AND DISCHARGE DEVICES	ALL		266	4- 5D10
314	ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES	ALL		214	4- 8B03
315	ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS	1	9	266	4- 4D10
		10	30	222	4-10C36
		32	363	266	4- 4D10
		364	411	222	4-10C36
		DIG. 1	DIG. 7	266	4- 4D10
318	ELECTRICITY, MOTIVE POWER SYSTEMS	1	34	217	4- 9D32
		35	38	212	4- 9D32
		39	113	217	4- 9D32
		114	135	212	4- 9D32
		136	832	217	4- 9D32
		DIG. 2		217	4- 9D32
320	ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING	ALL		212	4- 9C08
322	ELECTRICITY, SINGLE GENERATOR SYSTEMS	ALL		212	4- 9C08
323	ELECTRICITY, POWER SUPPLY, OR REGULATION SYSTEMS	ALL		212	4- 9C08
324	ELECTRICITY, MEASURING AND TESTING	51	65R	267	4- 5D06
		66	158T	267	4- 5D34
		160	180	267	4- 5D06
		200	376	267	4- 5D34
		377	402	267	4- 5D06
		403	800	267	4- 5D34
		DIG. 1		267	4- 5D06
328	MISCELLANEOUS ELECTRON SPACE DISCHARGE DEVICE SYSTEMS	1	226	254	4- 7C34
		227	238	266	4- 5D10
		239	271	254	4- 7C34
329	DEMODULATORS AND DETECTORS	ALL		252	4- 7B15
330	AMPLIFIERS	1A	3	252	4- 7B15
		4	4.3	222	4-10C36
		4.5	311	252	4- 7B15
331	OSCILLATORS	ALL		252	4- 7B15

JUNE 1985

IV-23

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
332	MODULATORS	1 7.51 8	7.5 68	252 222 252	4- 7B15 4-10C36 4- 7B15
333	WAVE TRANSMISSION LINES AND NETWORKS	ALL		252	4- 7C34
334	TUNERS	ALL		252	4- 7C34
335	ELECTRICITY, MAGNETICALLY OPERATED SWITCHES, MAGNETS AND ELECTRO- MAGNETS	ALL		216	4- 8D04
336	INDUCTOR DEVICES	ALL		215	4- 9D04
337	ELECTRICITY, ELECTROTHERMALLY OR THERMALLY ACTUATED SWITCHES	ALL		216	4- 8D04
338	ELECTRICAL RESISTORS	ALL		213	4- 9D04
339	ELECTRICAL CONNECTORS	ALL		322	3- 6D34
340	COMMUNICATIONS, ELECTRICAL	19A 146.2 286M 347AD 348 5C0 7C0 850 870.01	146 346 347R 407 696 825.98 861 996	268 232 264 217 264 268 264 221 264	4- 5D34 4-11C30 4- 5D34 4- 9D04 4- 5D34 4- 5D34 4- 5D34 4-10C36 4- 5D34
343	COMMUNICATIONS, RADIO WAVE	5AF 3E0 7C0PS DIG. 1	18R 465 916 DIG. 2	222 222 251 251	4-10C16 4-10D36 4- 8D32 4- 8D32
346	RECORDERS	1.1 2CC	165 227	216 154	4- 8D04 2-11D--
350	OPTICS, SYSTEMS AND ELEMENTS	1.1 4.1 6.1 56.1 57 117 120 258 266 DIG. 3	3.86 4.2 6.91 56.34 116 129 257 265 642	257 211 257 251 257 211 257 211 257 257	4- 8D32 4- 9B31 4- 8D32 4- 7C34 4- 8D32 4- 9B31 4- 8D32 4- 9B31 4- 8D32 4- 8D32
351	OPTICS, EYE EXAMINING, VISION TESTING AND CORRECTING	ALL		257	4- 8D32
352	OPTICS, MOTION PICTURES	ALL		211	4- 9E03
353	OPTICS, IMAGE PROJECTORS	ALL		246	4- 6C23

JUNE 1985

IV-24

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
354	PHOTOGRAPHY	ALL		211	4- 9831
355	PHOTOCOPYING	1	2	211	4- 9831
		38E	16	215	4- 9831
		18	133	211	4- 9831
356	OPTICS, MEASURING AND TESTING	1		222	4-10C16
		2	3	255	4- 8D04
		4		222	4-10C16
		4.5		255	4- 8E05
		5		222	4-10C35
		6	27	255	4- 8D04
		28		222	4-10C16
		28.5		222	4-10C35
		29		222	4-10C16
		30	140	255	4- 8D04
		141		222	4-10C16
		142	151	255	4- 8D04
		152		222	4-10C16
		153	448	255	4- 8D04
357	ACTIVE SOLID STATE DEVICES, E.G., TRANSISTORS, SOLID STATE DIODES	1	22	253	4- 7815
		23.1	23.9	253	4- 8809
		24	92	253	4- 7815
358	PICTORIAL COMMUNICATIONS; TELEVISION	1	83	262	4- 5C08
		84	86	261	4- 5C08
		87	113	262	4- 5C08
		114	124	222	4-10C16
		125	208	262	4- 5C08
		209	224	261	4- 5C08
		225	243	262	4- 5C08
		244	244.2	235	4-11D06
		245	258	262	4- 5C08
		259		222	4-10C16
		260	295	262	4- 5C08
		296	304	216	4- 8803
		305		262	4- 5C08
		310	348	235	4-11D06
		901	905	262	4- 5C08
		906	908	235	4-11D06
360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL	1	80	235	4-11D06
		81	137	233	4-11D06
361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES	1	246	214	4- 8803
		247	266	211	4- 9C08
		267	270	214	4- 8803
		271	326	211	4- 9C08
		327	330	211	4- 8803
		331	396	214	4- 8803
		397	416	215	4- 8803
		417	432	214	4- 8803
		433	436	211	4- 9C08
		437		214	4- 8803
362	ILLUMINATION	ALL		342	4- 2C08

JUNE 1985

IV-25

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
363	ELECTRIC POWER CONVERSION SYSTEMS	ALL		212	4- 9C08
364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	130	154	236	4-11C30
		200		237	4-11C34
		300		232	4-11C34
		400	423	236	4-11C30
		424	467	234	4-11C30
		468	479	236	4-11C30
		480	512	234	4-11C30
		513		236	4-11C30
		513.5		237	4-11C30
		514	582	234	4-11C30
		600	608	236	4-11C30
		700	736	232	4-11C30
		737	741	236	4-11C30
		742	788	232	4-11C30
		800	864	236	4-11C30
		900		237	4-11C34
365	STATIC INFORMATION STORAGE AND RETRIEVAL	ALL		233	4-11D06
366	AGITATING	ALL		242	4- 7D14
367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES	1	92	222	4-10C36
		93	94	268	4- 5D34
		95	139	222	4-10C36
		140	191	221	4-10C36
		197	199	264	4- 5D34
		900	912	222	4-10C36
368	HOROLGY: TIME MEASURING SYSTEMS OR DEVICES	ALL		217	4- 9D32
369	DYNAMIC INFORMATION STORAGE OR RETRIEVAL	1	32	235	4-11D06
		33	42	246	4- 6C23
		43	54	235	4-11D06
		55	57	246	4- 6C23
		58	62	235	4-11D06
		63		246	4- 6C23
		64		235	4-11D06
		65	68	246	4- 6C23
		69	70	235	4-11D06
		71	75.2	246	4- 6C23
		76		235	4-11D06
		77.1	82	246	4- 6C23
		83	95	235	4-11D06
		96		246	4- 6C23
		97		235	4-11D06
		98	99	246	4- 6C23
		100	126	235	4-11D06
		127		246	4- 6C23
		128	152	235	4-11D06
		153	173	246	4- 6C23
		174	175	235	4-11D06
		176	274	246	4- 6C23
		275	276	235	4-11D06
		277	292	246	4- 6C23

93

BEST COPY AVAILABLE

JUNE 1985

IV-26

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUECLASSES FROM	TO	ART UNIT	SEARCH ROOM
370	MULTIPLEX COMMUNICATIONS	ALL		263	4- 5C34
371	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY	ALL		236	4-11C30
372	COHERENT LIGHT GENERATORS	ALL		251	4- 8D32
373	INDUSTRIAL ELECTRIC HEATING FURNACES	ALL		214	4- 8B03
374	THERMAL MEASURING AND TESTING	ALL		246	4- 6C24
375	PULSE OR DIGITAL COMMUNICATIONS	1 2.1 3	2.2 122	263 222 263	4- 5C08 4-11C30 4- 5C08
376	INDUCED NUCLEAR REACTIONS, SYSTEMS AND ELEMENTS	ALL		221	4-10C36
377	ELECTRICAL PULSE COUNTERS, PULSE DIVIDERS OR SHIFT REGISTERS: CIRCUITS AND SYSTEMS	ALL		254	4- 7C34
378	X-RAY OR GAMMA RAY SYSTEMS OR DEVICES	ALL		256	4- 8C34
381	ELECTRICAL AUDIO SIGNAL PROCESSING AND SYSTEMS	1 29 54	28 53 124	261 237 261	4- 5C08 4-11C30 4- 5C08
382	IMAGE ANALYSIS	ALL		266	4- 5C10
383	FLEXIBLE BAGS	1 34.1 35 86.1 87	34 86 86.2 908	241 241 241 241 241	4- 6C10 34- 3D48 4- 6C10 34- 3D48 4- 6C10
384	BEARING OR GUIDES	ALL		245	4- 7D36
400	TYPEWRITING MACHINES	ALL		337	34- 3D68
401	COATING IMPLEMENTS WITH MATERIAL SUPPLY	ALL		332	4- 4D38
402	BINDER DEVICE RELEASABLY ENGAGING APERTURE OR NOTCH OF SHEET	ALL		327	3- 6D12
403	JOINTS AND CONNECTIONS	ALL		351	3- 4A12
404	ROAD STRUCTURE, PROCESS AND APPARATUS	ALL		356	3- 4C30
405	HYDRAULIC AND EARTH ENGINEERING	ALL		351	3- 4C10
406	CONVEYORS, FLUID CURRENT	ALL		313	3- 5D10

JUNE 1985

IV-27

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
407	CUTTERS, FOR SHAPING	ALL		321	3- 6D12
408	CUTTING BY USE OF ROTATING AXIALLY MOVING TOOL	ALL		322	3- 6D34
409	GEAR CUTTING, MILLING, OR PLANING	ALL		322	3- 7C17
410	FREIGHT ACCOMMODATION ON FREIGHT CARRIER	ALL		312	3- 4C17
411	EXPANDED, THREADED, HEADED, AND DRIVEN FASTENERS, OR LOCKED OR COUPLED BOLTS OR NUTS	ALL		358	3- 3C06
412	BOOKBINDING: PROCESS AND APPARATUS	ALL		327	3- 6D10
413	SHEET METAL CONTAINER MAKING	ALL		321	3- 7C17
414	MATERIAL OR ARTICLE HANDLING	1 229 786 787 900	228 785	317 317 317 317 317	3- 5D32 3- 5D34 3- 4D30 3- 5D34 3- 5C07
415	ROTARY KINETIC FLUID MOTORS OR PUMPS	ALL		341	4- 3D08
416	FLUID REACTION SURFACES (I.E., IMPELLERS)	ALL		341	4- 3C10
417	PUMPS	ALL		343	4- 3C10
418	ROTARY EXPANSIBLE CHAMBER DEVICES	ALL		343	4- 3C10
419	POWDER METALLURGY - PROCESSES	ALL		223	4-10C36
420	NONFERROUS ALLOYS OR METALLIC COMPOSITIONS	ALL		111	3-10C24
422	PROCESS DISINFECTING, DEODORIZING, PRESERVING OR STERILIZING, AND CHEMICAL APPARATUS	1 186 187 903	185 186.3 902 907	134 223 134 223	3- 9C04 4-10C16 3- 9C04 4-10C16
423	CHEMISTRY, INORGANIC	1 2 21.1 249 262 016. 1	20 248 261 659 016. 19	113 223 113 223 113 113	3- 9D06 4-10C36 3- 9D06 4-10C36 3- 9D06 3- 9D06
424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	1.1 2		223 123	4-10C36 2- 8C14

95

BEST COPY AVAILABLE

JUNE 1985

IV-28

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUECLASSES FROM	TO	ART UNIT	SEARCH ROOM
424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	3 4 6 7.1 10 11 14 40 48 71 85 86 87 89 91 94 114 DIG. 1	5 9 39 47 70 84 88 90 93 113 197.1 DIG. 15	128 125 123 128 123 128 123 125 123 127 123 127 123 127 128 125 125	2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14 2- 8C14
425	PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS	1 382.2 DIG. 1	382R 817R DIG. 249	138 138 138	3- 8B03 3- 8B07 3- 8B07
426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS AND PRODUCTS	1 7 66	6 64 811	132 128 132	3- 8B13 2- 8C13 3- 8B13
427	COATING PROCESSES	1 213.3 214	213 213.36 445	152 223 152	2-11D-- 4-10C16 2-11D--
428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES	1 85 98 141 402.2 403 539.5 540 544 546 567 688 923	84 97 140 402 402.24 537.7 543 545 566 687 922 541	156 154 156 154 223 154 223 154 111 223 111 154 111	2-11D-- 2-11D-- 2-11D-- 2-11D-- 4-10C36 2-11D-- 4-10C36 2-11D-- 3-10C24 4-10C36 3-10C36 2-11D-- 3-10C24
429	CHEMISTRY, ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT AND PROCESS	ALL		114	3-10C24
430	RADIATION IMAGERY CHEMISTRY - PROCESS, COMPOSITION OR PRODUCT	ALL		156	2-11E--
431	COMBUSTION	ALL		345	4- 3C38
432	HEATING	ALL		344	4- 3C10
433	DENTISTRY	ALL		333	4- 4D10

JUNE 1985

IV-29

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
434	EDUCATION, DEMONSTRATION, CRYPTOGRAPHY	1 11	10 433	222 334	4-10C36 4- 4C10
435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	1 44 174 183 235 240 262 317	43 173 182 234 239 261 316 948	128 127 128 127 128 127 128 127	2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07
436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	1 8 20 5C0 5C1 5C4 506 512 519 523 542 547 548 800 8C1 8C4 8C5 814 815 9C0	7 19 183 503 505 511 518 522 541 546 803 813 829 910	134 223 134 223 128 223 128 128 128 128 223 128 128 223 128 223 128 128 134	3- 9C04 4-10C16 3- 9C04 4-10C16 2- 8C13 4-10C16 2- 8C14 2- 8C13 2- 8C14 2- 8C13 4-10C16 2- 8C14 2- 8C13 4-10C16 2- 8C13 2- 8C14 2- 8C13 3- 9C04
440	MARINE PROPULSION	ALL		315	3- 6C04
441	BUOYS, RAFTS, AND AQUATIC DEVICES	ALL		315	3- 6B07
445	ELECTRIC LAMP OR SPACE DISCHARGE COMPONENT OR DEVICE MANUFACTURING	ALL		325	3- 7C17
446	AMUSEMENT DEVICES, TOYS	1 2	901	331 333	3- 3A05 4- 4D10
455	TELECOMMUNICATIONS	1 26 31	25 30 620	263 222 263	4- 5C34 4-10C36 4- 5C34
464	ROTARY SHAFTS, GUDGEONS, HOUSINGS AND FLEXIBLE COUPLINGS FOR ROTARY SHAFTS	ALL		245	4- 7D36
474	ENDLESS BELT POWER TRANSMISSION SYSTEMS AND COMPONENTS	ALL		356	3- 4C30

JUNE 1985

IV-30

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUECLASSES FROM	TO	ART UNIT	SEARCH ROOM
493	MANUFACTURING CONTAINER OR TUBE FROM PAPER; OR OTHER MANUFACTURING FROM A SHEET A WEB	ALL		327	3- 6D10
494	IMPERFORATE BOWL, CENTRIFUGAL SEPARATORS	ALL		242	4- 7D14
501	COMPOSITIONS: CERAMIC	ALL		118	3- 9C32
502	CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR PROCESS OF MAKING	1 424	423 527	116 116	3- 9C03 3- 9E11
514	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	ALL		125	2- 8C14
518	CHEMISTRY, FISCHER-TROPSCH REACTION; OR PURIFICATION, RECOVERY OR CONVERSION OF THE PRODUCTS OF SUCH PROCESSES	ALL		126	2- 9C10
520	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	ALL		155	2-10C15
521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	25 40 50	39 49.8 921	155 151 153	2-10C15 2-10C15 2-10C15
523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	1 106 109 111 115 121 124 129 130 134 136 139 160 164 167 171 175 200 218 220 303 427 435 436 446 450 451 462	105 108 114 120 123 128 132 135 138 159 161 166 170 174 181 217 219 300 426 434 445 449 461 463	155 151 153 155 153 151 155 151 155 151 153 155 151 155 151 153 151 153 151 153 155 151 153 151 153 155	2-10C15 2-10C15

JUNE 1985

IV-31

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
523	SYNTHETIC RESINS OR	464	468	151	2-10C15
	NATURAL RUBBERS -- PART	500	505	155	2-10C15
	OF THE CLASS 520 SERIES	506	512	153	2-10C15
		513		151	2-10C15
		514	516	153	2-10C15
		517		155	2-10C15
		518	527	151	2-10C15
524	SYNTHETIC RESINS OR	1	8	151	2-10C15
	NATURAL RUBBERS -- PART	9	58	153	2-10C15
	OF THE CLASS 520 SERIES	59	71	151	2-10C15
		72	78	153	2-10C15
		79		151	2-10C15
		80	185	153	2-10C15
		186	269	155	2-10C15
		270	274	153	2-10C15
		275	279	151	2-10C15
		280	322	155	2-10C15
		323	353	153	2-10C15
		354	391	155	2-10C15
		392	400	153	2-10C15
		401	456	151	2-10C15
		457	461	155	2-10C15
		462	473	153	2-10C15
		474	491	155	2-10C15
		492	497	151	2-10C15
		498		153	2-10C15
		499		155	2-10C15
		500		151	2-10C15
		501		155	2-10C15
		502	542	151	2-10C15
		543	587	155	2-10C15
		588		151	2-10C15
		589	590	153	2-10C15
		591		155	2-10C15
		592	595	153	2-10C15
		596		155	2-10C15
		597		151	2-10C15
		598		155	2-10C15
		599	607	153	2-10C15
		608	609	155	2-10C15
		610		151	2-10C15
		611	612	153	2-10C15
		650	700	151	2-10C15
		701	704	153	2-10C15
		705		151	2-10C15
		706	713	153	2-10C15
		714	731	155	2-10C15
		732	735	153	2-10C15
		736	741	155	2-10C15
		742	754	153	2-10C15
		755	762	155	2-10C15
		763		151	2-10C15
		764		153	2-10C15
		765	778	155	2-10C15
		779	791	151	2-10C15
		792	796	155	2-10C15
		797	799	153	2-10C15

JUNE 1985

IV-32

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUECLASSES FROM	TO	ART UNIT	SEARCH ROOM
524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	800	846	155	2-10C15
		847		151	2-10C15
		848	856	155	2-10C15
		857	869	151	2-10C15
		871	881	153	2-10C15
		900	929	155	2-10C15
525	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	7	8	155	2-10C15
		10	54	151	2-10C15
		54.1	54.45	155	2-10C15
		54.5	111	151	2-10C15
		111.5		155	2-10C15
		112	133	151	2-10C15
		133.5		155	2-10C15
		134	167	151	2-10C15
		167.5		155	2-10C15
		168	301	151	2-10C15
		301.5		155	2-10C15
		302	324	151	2-10C15
		326.1	338	155	2-10C15
		339	420	151	2-10C15
		420.5		155	2-10C15
		421	444	151	2-10C15
		444.5		155	2-10C15
		445	501	151	2-10C15
		501.5		155	2-10C15
		502	517	151	2-10C15
		517.5		155	2-10C15
		518	941	151	2-10C15
		942		155	2-10C15
526	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	ALL		155	2-10C15
527	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	100	403	153	2-10C15
		500	503	151	2-10C15
		600	604	153	2-10C15
528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	1	3	153	2-10C15
		4	26	151	2-10C15
		26.5		153	2-10C15
		27	43	151	2-10C15
		44	195	153	2-10C15
		196	204	151	2-10C15
		205	245.5	153	2-10C15
		246	264	151	2-10C15
		265	308	153	2-10C15
		308.1	309.1	155	2-10C15
		310	328	153	2-10C15
		329.1		143	3- 7C06
		330	369	153	2-10C15
		370	391	151	2-10C15
		392	503	153	2-10C15
		901		151	2-10C15
		902	950	153	2-10C15

BEST COPY AVAILABLE

100

JUNE 1985

IV-33

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
530	CHEMISTRY, LIGNINS OR REACTION PRODUCTS THEREOF	ALL		123	2- 8A10
534	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	7 10 550	16 887	124 223 124	3- 9D04 4-10C16 2- 8C14
536	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1.1 2 4.1 30 51 56 112	3 29 50 55.3 111 128	123 155 123 155 123 155 123	2- 8C13 2-10C15 2- 8C13 2-10C15 2- 8C13 2-10C15 2- 8C13
544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1 15 31 35 47 59 179 224 283 297 363 364 374 392	14 30 34 46 58.7 178 223 282 296 362 373 391 410	121 122 121 129 121 129 121 122 129 122 129 122 129 122	2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11 2- 8C11
546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1 13 21 26 79 58 108 111 139 150 164 183 184 186 192 207 242	12 20 25 78 97 107 110 138 149 163 182 185 191 206 241 353	122 129 121 122 121 122 129 121 129 122 129 122 121 129 121 121	2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07
548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	100 110 120 250 257 262 300 400 416 421	109 119 249 256 261 269 379 415 420 438	122 129 122 129 122 129 121 122 121 122	2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9C07 2- 9D08 2- 9C07

181

BEST COPY AVAILABLE

JUNE 1985

IV-34

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES FROM	TO	ART UNIT	SEARCH ROOM
548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	439	449	129	2- 9D08
		450	451	122	2- 9C07
		452	459	129	2- 9C07
		460	491	122	2- 9C07
		492	502	129	2- 9C07
		503	529	122	2- 9C07
		530	540	121	2- 9D08
		541	556	121	2- 9C07
		557	559	121	2- 9D08
		560	565	122	2- 9C07
		566	579	121	2- 9D08
549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1	58	121	2- 9C07
		59	90	123	2- 9C07
		200	232	129	2- 9C07
		233		121	2- 9C07
		234	251	129	2- 9C07
		252	262	121	2- 9C07
		263	274	129	2- 9C07
		275	290	121	2- 9C07
		291	296	129	2- 9C07
		297	312	121	2- 9C07
		313	334	129	2- 9C07
		335	336	123	2- 9C07
		337	356	129	2- 9C07
		357	366	123	2- 9C07
		367	368	129	2- 9C07
		369	428	123	2- 9C07
		429	431	129	2- 9C07
		432	455	123	2- 9C07
		456	471	121	2- 9C07
		472	563	129	2- 9C07
556	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1	190	124	2- 8C14
		400	489	124	2- 8D18
560	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL		126	2- 9C10
562	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL		126	2- 9C10
564	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1	224	124	2- 9C10
		225	296	126	2- 9C10
		297	512	124	2- 9C10
568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	1	17	124	2- 9C10
		18	30	122	2- 9C10
		31		126	2- 9C10
		32	36	122	2- 9C10
		37		126	2- 9C10
		38	40	122	2- 9C10
		41	43	126	2- 9C10
		44	62	122	2- 9C10
		63	64	126	2- 9C10
		65	77	122	2- 9C10
		300	923	126	2- 9C10
		924	949	223	4-10C16

JUNE 1985

IV-35

CLASSES ARRANGED NUMERICALLY WITH ART UNIT AND SEARCH ROOM LOCATIONS

CLASS	CLASS TITLE	SUBCLASSES		ART UNIT	SEARCH ROOM
		FROM	TO		
568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	950	959	126	2- 9C10
570	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	ALL		124	2- 8C13
585	CHEMISTRY, HYDROCARBONS	1	6	116	3- 9C03
		6.3	6.6	157	2-10C15
		7	956	116	3- 9C03
604	SURGERY	ALL		336	4- 4C34
901	ROBOTS	ALL		317	3- 5C07
935	GENETIC ENGINEERING: RECOMBINANT DNA TECHNOLOGY, HYBRID OR FUSED CELL TECHNOLOGY AND RELATED MANIPULATIONS OF NUCLEIC ACIDS	1	75	127	3- 8C11
		76	88	128	2- 8C11
		89	111	127	3- 8C11

CLASSES ARRANGED IN ALPHABETICAL ORDER

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
51	ABRADING	• 5	BEES
181	ACOUSTICS	• 6	BEE CULTURE
357	ACTIVE SOLID STATE DEVICES, E.G., TRANSISTORS, SOLID STATE DIODES	• 402	BINDER DEVICE RELEASABLY ENGAGING APERTURE OR NOTCH OF SHEET
156	ADHESIVE BONDING AND MISCELLANEOUS CHEMICAL MANUFACTURE	• 8	BLEACHING AND DYEING; FLUID TREAT- MENT AND CHEMICAL MODIFICATION OF TEXTILES AND FIBERS
226	ADVANCING MATERIAL OF INDETER- MINATE-LENGTH	• 10	BOLT, NAIL, NUT, RIVET AND SCREW MAKING
244	AERONAUTICS	• 412	BOOKBINDING: PROCESS AND APPARATUS
366	AGITATING	• 281	BOOKS, STRIPS AND LEAVES
102	AMMUNITION AND EXPLOSIVES	• 36	BOOTS, SHOES AND LEGGINGS
86	AMMUNITION AND EXPLOSIVE-CHARGE MAKING	• 12	BOXT AND SHOE MAKING
330	AMPLIFIERS	• 175	BORING OR PENETRATING THE EARTH
272	AMUSEMENT AND EXERCISING DEVICES	• 215	BOTTLES AND JARS
273	AMUSEMENT DEVICES, GAMES	• 188	BRAKES
446	AMUSEMENT DEVICES, TOYS	• 14	BRIDGES
119	ANIMAL HUSBANDRY	• 15	BRUSHING, SCRUBBING AND GENERAL CLEANING
D30	ANIMAL HUSBANDRY	• D 4	BRUSH WARE (1)
D 2	APPAREL AND FABERDASHERY	• 300	BRUSH, BROOM AND MOP MAKING
223	APPAREL APPARATUS	• 24	BUCKLES, BUTTONS, CLASPS, ETC.
2	APPAREL	• D25	BUILDING UNITS AND CONSTRUCTION ELEMENTS
D22	ARMS, PYROTECHNICS, HUNTING, FISHING, AND TRAPPING EQUIPMENT	• 441	BOATS, RAFTS, AND AQUATIC DEVICES
221	ARTICLE DISPENSING	• 17	BUTCHERING
3	ARTIFICIAL BODY MEMBERS	• 79	BUTTON MAKING
236	AUTOMATIC TEMPERATURE AND HUMIDITY REGULATION	• 40	CARD, PICTURE AND SIGN EXHIBITING
4	BATHS, CLOSETS, SINKS AND SPITTOONS	• 502	CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR PROCESS OF MAKING
136	BATTERIES, THERMOELECTRIC AND PHOTOELECTRIC	• 59	CHAIN, STAPLE AND HORSESHOE MAKING
384	BEARING OR GUIDES		

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
297	CHAIRS AND SEATS	• 372	COHERENT LIGHT GENERATORS
194	CHECK-CONTROLLED APPARATUS	• 133	COIN HANDLING
436	CHEMISTRY: ANALYTICAL AND IMMUNOLOGICAL TESTING	• 431	COMBUSTION
435	CHEMISTRY: MOLECULAR BIOLOGY AND MICROBIOLOGY	• 367	COMMUNICATIONS, ELECTRICAL: ACOUSTIC WAVE SYSTEM AND DEVICES
530	CHEMISTRY, LIGNINS OR REACTION PRODUCTS THEREOF	• 340	COMMUNICATIONS, ELECTRICAL
23	CHEMISTRY, ANALYTICAL AND PHYSICAL PROCESSES	• 343	COMMUNICATIONS, RADIO WAVE
260	CHEMISTRY, CARBON COMPOUNDS	• 501	COMPOSITIONS: CERAMIC
204	CHEMISTRY, ELECTRICAL AND WAVE ENERGY	• 252	COMPOSITIONS
429	CHEMISTRY, ELECTRICAL CURRENT PRODUCING APPARATUS, PRODUCT AND PROCESS	• 106	COMPOSITIONS, COATING OR PLASTIC
71	CHEMISTRY, FERTILIZERS	• 7	COMPOUND TOOLS
518	CHEMISTRY, FISCHER-TROPSCH REACTION; OR PURIFICATION, RECOVERY OR CONVERSION OF THE PRODUCTS OF SUCH PROCESSES	• 159	CONCENTRATING EVAPORATORS
585	CHEMISTRY, HYDROCARBONS	• 193	CONVEYERS, CHUTES, SKIDS, GUIDES AND WAYS
423	CHEMISTRY, INORGANIC	• 198	CONVEYERS, POWER-DRIVEN
279	CHUCKS OR SOCKETS	• 406	CONVEYORS, FLUID CURRENT
209	CLASSIFYING, SEPARATING AND ASSORTING SOLIDS	• 147	COPPERING
134	CLEANING AND LIQUID CONTACT WITH SOLIDS	• 30	CUTLERY
160	CLOSURES, PARTITIONS AND PANELS, FLEXIBLE AND PORTABLE	• 407	CUTTERS, FOR SHAPING
252	CLOSURE FASTENERS	• 408	CUTTING BY USE OF ROTATING AXIALLY MOVING TOOL
192	CLUTCHES AND POWER-STOP CONTROL	• 83	CUTTING
118	COATING APPARATUS	• 329	DEMODULATORS AND DETECTORS
401	COATING IMPLEMENTS WITH MATERIAL SUPPLY	• 433	DENTISTRY
427	COATING PROCESSES	• 232	DEPOSIT AND COLLECTION RECEPTACLES
		• 029	DEVICES AND EQUIPMENT AGAINST FIRE HAZARDS, FOR ACCIDENT PREVENTION AND FOR RESCUE
		• 222	DISPENSING
		• 202	DISTILLATION: APPARATUS
		• 203	DISTILLATION: PROCESSES, SEPARATORY

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
201	DISTILLATION: PROCESSES, THERMOLYTIC	• 361	ELECTRICITY, ELECTRICAL SYSTEMS AND DEVICES
424	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	•	
514	DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS	• 337	ELECTRICITY, ELECTROTHERMALLY OR THERMALLY ACTUATED SWITCHES
34	DRYING AND GAS OR VAPOR CONTACT WITH SOLIDS	•	
369	DYNAMIC INFORMATION STORAGE OR RETRIEVAL	• 335	ELECTRICITY, MAGNETICALLY OPERATED SWITCHES, MAGNETS AND ELECTRO-MAGNETS
360	DYNAMIC MAGNETIC INFORMATION STORAGE OR RETRIEVAL	•	
172	EARTH WORKING	• 324	ELECTRICITY, MEASURING AND TESTING
434	EDUCATION, DEMONSTRATION, CRYPTOGRAPHY	•	
381	ELECTRICAL AUDIO SIGNAL PROCESSING AND SYSTEMS	• 318	ELECTRICITY, ACTIVE POWER SYSTEMS
364	ELECTRICAL COMPUTERS AND DATA PROCESSING SYSTEMS	•	
339	ELECTRICAL CONNECTORS	• 322	ELECTRICITY, SINGLE GENERATOR SYSTEMS
310	ELECTRICAL GENERATOR OR MOTOR STRUCTURE	•	
377	ELECTRICAL PULSE COUNTERS, PULSE DIVIDERS OR SHIFT REGISTERS: CIRCUITS AND SYSTEMS	• 191	ELECTRICITY, TRANSMISSION TO VEHICLES
338	ELECTRICAL RESISTORS	•	
307	ELECTRICAL TRANSMISSION OR INTER-CONNECTION SYSTEMS	• 219	ELECTRIC HEATING
323	ELECTRICITY, POWER SUPPLY, OR REGULATION SYSTEMS	•	
320	ELECTRICITY, BATTERY AND CONDENSER CHARGING AND DISCHARGING	• 313	ELECTRIC LAMP AND DISCHARGE DEVICES
200	ELECTRICITY, CIRCUIT MAKERS AND BREAKERS	•	
174	ELECTRICITY, CONDUCTORS AND INSULATORS	• 314	ELECTRIC LAMP AND DISCHARGE DEVICES, CONSUMABLE ELECTRODES
		•	
		• 315	ELECTRIC LAMP AND DISCHARGE DEVICES, SYSTEMS
		•	
		• 445	ELECTRIC LAMP OR SPACE DISCHARGE COMPONENT OR DEVICE MANUFACTURING
		•	
		• 363	ELECTRIC POWER CONVERSION SYSTEMS
		•	
		• 187	ELEVATORS
		•	
		• 227	ELONGATED-PEPPER-DRIVING APPARATUS
		•	
		• D33	EMBROIDERY AND TRIMMINGS
		•	
		• 474	ENDLESS BELT POWER TRANSMISSION SYSTEMS AND COMPONENTS
		•	
		• 229	ENVELOPES, WRAPPERS AND PAPERBOARD BOXES
		•	
		• D 7	EQUIPMENT FOR PREPARING FOOD OR DRINK NOT ELSEWHERE SPECIFIED
		•	
		• D13	EQUIPMENT FOR PRODUCTION, DISTRIBUTION OR TRANSFORMATION OF ELECTRICITY
		•	
		•	
		•	

186

CLASSES ARRANGED IN ALPHABETICAL ORDER

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
371	ERROR DETECTION/CORRECTION AND FAULT DETECTION/RECOVERY	410	FREIGHT ACCOMMODATION ON FREIGHT CARRIER
37	EXCAVATING	44	FUEL AND IGNITING DEVICES
411	EXPANDED, THREADED, HEADED, AND DRIVEN FASTENERS, OR LOCKED OR COUPLED BOLTS OR NUTS	110	FURNACES
92	EXPANSIBLE CHAMBER DEVICES	D 6	FURNISHINGS
149	EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES	D21	GAMES, TOYS, AND SPORTS GOODS
168	FARRIERY	261	GAS AND LIQUID CONTACT APPARATUS
256	FENCES	55	GAS SEPARATION
42	FIREARMS	48	GAS, HEATING AND ILLUMINATING
169	FIRE-EXTINGUISHERS	409	GEAR CUTTING, MILLING, OR PLANING
182	FIRE ESCAPES, LADDERS, SCAFFOLDS	935	GENETIC ENGINEERING: RECOMBINANT DNA TECHNOLOGY, HYBRID OR FUSED CELL TECHNOLOGY AND RELATED MANIPULATIONS OF NUCLEIC ACIDS
43	FISHING, TRAPPING AND VERMIN DESTROYING	33	GEOMETRICAL INSTRUMENTS
383	FLEXIBLE BAGS	65	GLASS MANUFACTURING
141	FLUENT MATERIAL HANDLING, WITH RECEIVER OR RECEIVER COACTING MEANS	294	HANDLING, HAND AND HOIST-LINE IMPLEMENTS
303	FLUID-PRESSURE BRAKE AND ANALOGOUS SYSTEMS	54	HARNESS
D23	FLUID DISTRIBUTION EQUIPMENT, SANITARY, HEATING, VENTILATION AND AIR CONDITIONING EQUIPMENT, SOLID FUEL	56	HARVESTERS
137	FLUID HANDLING	237	HEATING SYSTEMS
416	FLUID REACTION SURFACES (I.E., IMPELLERS)	432	HEATING
239	FLUID SPRINKLING, SPRAYING AND DIFFUSING	165	HEAT EXCHANGE
D 1	FOODSTUFFS	108	HORIZONTALLY SUPPORTED PLANAR SURFACES
99	FOODS AND BEVERAGES: APPARATUS	368	CHRONOLOGY: TIME MEASURING SYSTEMS OR DEVICES
426	FOOD OR EDIBLE MATERIAL: PROCESSES, COMPOSITIONS AND PRODUCTS	405	HYDRAULIC AND EARTH ENGINEERING
		362	ILLUMINATION
		382	IMAGE ANALYSIS
		494	IMPERFORATE BOWL, CENTRIFUGAL SEPARATORS

CLASSES ARRANGED IN ALPHABETICAL ORDER

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
254	IMPLEMENTS OR APPARATUS FOR APPLYING PUSHING OR PULLING FOR	493	MANUFACTURING CONTAINER OR TUBE FROM PAPER; OR OTHER MANUFACTURING FROM A SHEET A WEB
376	INDUCED NUCLEAR REACTIONS, SYSTEMS AND ELEMENTS	440	MARINE PROFUSION
336	INDUCTOR DEVICES	D34	MATERIAL OR ARTICLE HANDLING EQUIPMENT (1)
373	INDUSTRIAL ELECTRIC HEATING FURNACES	414	MATERIAL OR ARTICLE HANDLING
123	INTERNAL-COMBUSTION ENGINES	73	MEASURING AND TESTING
63	JEWELRY	D10	MEASURING, TESTING OR SIGNALLING INSTRUMENTS (1) (2)
D11	JEWELRY, SYMBOLIC INSIGNIA AND ORNAMENTS	124	MECHANICAL GUNS AND PROJECTORS
403	JOINTS AND CONNECTIONS	D24	MEDICAL AND LABORATORY EQUIPMENT
277	JOINT PACKING	186	MERCHANDISING
D47	KNITTING AND NETTING	266	METALLURGICAL APPARATUS
289	KNOTS AND KNOT TYING	75	METALLURGY
280	LAND VEHICLES	72	METAL DEFORMING
278	LAND VEHICLES, ANIMAL DRAFT APPLIANCES	164	METAL FOUNCING
296	LAND VEHICLES, BODIES AND TOPS	228	METAL FUSION BONDING
298	LAND VEHICLES, DUMPING	76	METAL TOOLS AND IMPLEMENTS, MAKING
301	LAND VEHICLES, WHEELS AND AXLES	148	METAL TREATMENT
69	LEATHER MANUFACTURES	29	METAL WORKING
D26	LIGHTING	196	MINERAL OILS: APPARATUS
122	LIQUID HEATERS AND VAPORIZERS	208	MINERAL OILS: PROCESSES AND PRODUCTS
210	LIQUID PURIFICATION OR SEPARATION	299	MINING OR IN SITU DISINTEGRATION OF HARD MATERIAL
70	LOCKS	328	MISCELLANEOUS ELECTRON SPACE DISCHARGE DEVICE SYSTEMS
184	LUBRICATION	16	MISCELLANEOUS HARDWARE
D15	MACHINES, NOT ELSEWHERE SPECIFIED	D99	MISCELLANEOUS
74	MACHINE ELEMENTS AND MECHANISMS	332	MODULATORS
308	MACHINE ELEMENTS, BEARINGS AND GUIDES	91	MOTORS, EXPANSIBLE CHAMBER TYPE
282	MANIFOLDING		

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
185	MOTORS, SPRING, WEIGHT AND ANIMAL POWERED	• 534	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
180	MOTOR VEHICLES	•	
49	MOVABLE OR REMOVABLE CLOSURES	• 556	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
370	MULTIPLEX COMMUNICATIONS	•	
D17	MUSICAL INSTRUMENTS	• 549	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
84	MUSIC	•	
163	NEEDLE AND PIN MAKING	• 536	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
420	NONFERROUS ALLOYS OR METALLIC COMPOSITIONS	•	
D19	OFFICE SUPPLIES, ARTISTS "AND TEACHERS" MATERIALS	• 570	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
351	OPTICS, EYE EXAMINING, VISION TESTING AND CORRECTING	•	
353	OPTICS, IMAGE PROJECTORS	• 548	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES
356	OPTICS, MEASURING AND TESTING	•	
352	OPTICS, MOTION PICTURES	• 331	OSCILLATORS
350	OPTICS, SYSTEMS AND ELEMENTS	•	
89	ORDNANCE	• D 9	PACKAGES AND CONTAINERS FOR GOODS (1)
568	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	•	
546	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	• 224	PACKAGE AND ARTICLE CARRIERS
560	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	•	
531	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	• 53	PACKAGE MAKING
564	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	•	
562	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	• 162	PAPER MAKING AND FIBER LIBERATION
544	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	•	
542	ORGANIC COMPOUNDS -- PART OF THE CLASS 532-570 SERIES	• D59	PAPER MANUFACTURES
		•	
		• D28	PHARMACEUTICAL, COSMETIC PRODUCTS, AND TOILET ARTICLES
		•	
		• 355	PHOTOCOPYING
		•	
		• D16	PHOTOGRAPHY AND OPTICAL EQUIPMENT
		•	
		• 354	PHOTOGRAPHY
		•	
		• 358	PICTORIAL COMMUNICATION; TELEVISION
		•	
		• 138	PIPES AND TUBULAR CONDUITS
		•	
		• 285	PIPE JOINTS OR COUPLINGS
		•	
		• 111	PLANTING
		•	
		• PLT	PLANTS
		•	
		• 47	PLANT HUSBANDRY
		•	
		• 264	PLASTIC AND NONMETALLIC ARTICLE SHAPING OR TREATING: PROCESSES
		•	
		•	

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
425	PLASTIC ARTICLE OR EARTHENWARE SHAPING OR TREATING: APPARATUS	• 62	REFRIGERATION
419	POWDER METALLURGY - PROCESSES	• 235	REGISTERS
60	POWER PLANTS	• 152	RESILIENT TIRES AND WHEELS
100	PRESSES	• 404	ROAD STRUCTURE, PROCESS AND APPARATUS
290	PRIME-MOVER DYNAMO PLANTS	• 901	ROBOTS
283	PRINTED MATTER	• 418	ROTARY EXPANSIBLE CHAMBER DEVICES
D18	PRINTING AND OFFICE MACHINERY	• 415	ROTARY KINETIC FLUID MOTORS OR PUMPS
101	PRINTING	• 464	ROTARY SHAFTS, GUDGEONS, HOUSINGS AND FLEXIBLE COUPLINGS FOR ROTARY SHAFTS
D64	PRINTING	• 109	SAFES, BANK PROTECTION AND RELATED DEVICES
422	PROCESS DISINFECTING, DEODORIZING, PRESERVING OR STERILIZING, AND CHEMICAL APPARATUS	• D20	SALES AND ADVERTISING EQUIPMENT
375	PULSE OR DIGITAL COMMUNICATIONS	• 234	SELECTIVE CUTTING (E.G., PUNCHING)
417	PUMPS	• 225	SEVERING BY TEARING OR BREAKING
150	PURSES, WALLETS, AND PROTECTIVE COVERS	• 112	SEWING
250	RADIANT ENERGY	• 270	SHEET-MATERIAL ASSOCIATING
430	RADIATION IMAGERY CHEMISTRY - PROCESS, COMPOSITION OR PRODUCT	• 271	SHEET FEEDING OR DELIVERING
104	RAILWAYS	• 413	SHEET METAL CONTAINER MAKING
238	RAILWAYS, SURFACE TRACK	• 114	SHIPS
213	RAILWAY DRAFT APPLIANCES	• 116	SIGNALS AND INDICATORS
258	RAILWAY MAIL DELIVERY	• 241	SOLID MATERIAL COMMINUTION OR DISINTEGRATION
105	RAILWAY ROLLING STOCK	• 206	SPECIAL RECEPTACLE OR PACKAGE
246	RAILWAY SWITCHES AND SIGNALS	• 267	SPRING DEVICES
295	RAILWAY WHEELS AND AXLES	• 365	STATIC INFORMATION STORAGE AND RETRIEVAL
220	RECEPTACLES	• 249	STATIC MOLES
346	RECORDERS	• 52	STATIC STRUCTURES, E.G., BUILDINGS
D14	RECORDING, COMMUNICATION OR INFORMATION RETRIEVAL EQUIPMENT		

CLASSES ARRANGED IN ALPHABETICAL ORDER

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
428	STOCK MATERIAL OR MISCELLANEOUS ARTICLES	• 135	TENTS, CANCPIES, UMBRELLAS AND CANES
125	STONE WORKING	•	
126	STOVES AND FURNACES	• 87	TEXTILES, BRAICING, NETTING AND LACE MAKING
127	SUGAR, STARCH AND CARBOHYDRATES	•	
248	SUPPORTS	• 26	TEXTILES, CLOTH FINISHING
312	SUPPORTS, CABINET STRUCTURES	•	
211	SUPPORTS, RACKS	• 19	TEXTILES, FIBER PREPARATION
604	SURGERY	•	
128	SURGERY	• 68	TEXTILES, FLUID TREATING APPARATUS
528	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	•	
523	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	• 38	TEXTILES, IRONING OR SMOOTHING
524	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	•	
526	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	• 66	TEXTILES, KNITTING
527	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	•	
521	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	• 28	TEXTILES, MANUFACTURING
520	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	•	
525	SYNTHETIC RESINS OR NATURAL RUBBERS -- PART OF THE CLASS 520 SERIES	• 57	TEXTILES, SPINNING, TWISTING AND TWINING
455	TELECOMMUNICATIONS	•	
178	TELEGRAPHY	• 139	TEXTILES, WEAVING
179	TELEPHONY	•	
		• 374	THERMAL MEASURING AND TESTING
		•	
		• 130	THRESHING
		•	
		• D27	TOBACCO AND SMOKERS SUPPLIES
		•	
		• 131	TOBACCO
		•	
		• 132	TOILET
		•	
		• D 8	TOOLS AND HARDWARE
		•	
		• 81	TOOLS
		•	
		• 173	TOOL DRIVING OR IMPACTING
		•	
		• 291	TRACK SANDERS
		•	
		• D12	TRANSPORTATION (1)
		•	
		• D 3	TRAVEL GOODS AND PERSONAL BELONGINGS
		•	
		• 212	TRAVERSING HOISTS
		•	
		• 190	TRUNKS AND HAND CARRIED LUGGAGE
		•	
		• 334	TUNERS
		•	
		• 82	TURNING
		•	
		• 400	TYPEWRITING MACHINES
		•	

JUNE 1985

CLASSES ARRANGED IN ALPHABETICAL ORDER

V- 9

CLASS	TITLE OF CLASS	CLASS	TITLE OF CLASS
199	TYPE CASTING	.	
276	TYPE SETTING	.	
27	UNDERTAKING	.	
171	UNEARTHING PLANTS OR BURIED OBJECTS	.	
251	VALVES AND VALVE ACTUATION	.	
293	VEHICLE FENDERS	.	
98	VENTILATION	.	
D32	WASHING, CLEANING, OR DRYING MACHINE	.	
333	WAVE TRANSMISSION LINES AND NETWORKS	.	
D92	WEAVING, SHEET MATERIAL AND LINOLEUM	.	
177	WEIGHING SCALES	.	
166	WELLS	.	
157	WHEELWRIGHT MACHINES	.	
305	WHEEL SUBSTITUTES FOR LAND VEHICLES	.	
231	WHIPS AND WHIP APPARATUS	.	
242	WINDING AND REELING	.	
140	WIREWORKING	.	
245	WIRE FABRICS AND STRUCTURE	.	
217	WOODEN RECEPTACLES	.	
145	WOODWORKING TOOLS	.	
144	WOODWORKING	.	
142	WOOD TURNING	.	
269	WORK HOLDERS	.	
378	X-RAY OR GAMMA RAY SYSTEMS OR DEVICES	.	

112

BEST COPY AVAILABLE

JUNE 1985

400	MEASURING, TESTING, OR INSPECTING DYE PROCESS	454	..Basic dye, including diphenylmethane, triphenylmethane, xanthene, fluorene, methine, acridine, oxazine, phenazine, flavylum, naphthoperinone, quinophthalone, quaternary ammonium group, etc., containing
401	USING ENZYMES, DYE PROCESS, COMPOSITION, OR PRODUCT OF DYEING	455	..Acid (including direct) dye, e.g., sulfonated, sulfamated, etc.
402	WOOD DYEING PROCESS	456	..Disperse dye
403	FUGITIVE DYE COMPOSITION, PROCESS OR PRODUCT	457	..Discharge utilized
404	DYEING INVOLVING ANIMAL-DERIVED NATURAL FIBER MATERIAL (OTHER THAN SOLELY WOOL OR SILK), E.G., LEATHER, FUR, HAIR, FEATHERS, ETC., COMPOSITION, PROCESS, OR PRODUCT	458	..Chemically modified local areas
405	.Hair dyeing	459	..Oxidation dye, e.g., aniline, nitroaniline, etc.
406	..Oxidation dye	460	..Mordant dye
407	...With dye other than oxidation dye	461	..Vat dye or sulfur dye, e.g., quinonic or indigoid reducible, or sulfur-organic compound reaction product dye, etc.
408	...Plural dyes or dye and coupling agent	462	..Basic dye, including diphenylmethane, triphenylmethane, xanthene, fluorene, methine, acridine, oxazine, phenazine, flavylum, naphthoperinone, quinophthalone, quaternary ammonium group, etc., containing
409	Heterocyclic amine dye	463	..Acid (including direct) dye, e.g., sulfonated, sulfamated, etc.
410	Paradiaminobenzene dye	464	..Disperse dye
411	With metadiaminobenzene dye	465	..Vat dye or sulfur dye, e.g., quinonic or indigoid reducible dye, sulfur-organic compound reaction product dye, etc.
412	With aminophenol dye	466	..Azo dye
414	...Nitroaniline dye	467	DIFFUSION TRANSFER DYEING PROCESS, TRANSFER SHEET AND PRODUCT
415	...Nitrophenylenediamine dye	468	..Release layer utilized
416	...Aryldiamine dye	469	..Steam
421	...Aminophenol dye	470	..Dry heat treatment for penetration
423	...Aminoheterocyclic dye	471	..Sublimation
424	...Phenols (natural oxidation dye)	472	...Air pressure
425	..Mordant, solvent dye formation or metallized azo dye	473	SUBAMBIENT TEMPERATURE DYEING PROCESS, I.E., LESS THAN 20 DEGREES C.
426	..Basic dye, including diphenylmethane, triphenylmethane, xanthene, fluorene, methine, acridine, oxazine, phenazine, flavylum, naphthoperinone, quinophthalone, quaternary ammonium group, etc., containing	474	REACTIVE GAS OR REACTIVE VAPOR UTILIZED IN DYE PROCESS
428	..Dye reactive with hair	475	CONFINED GAS PHASE SUPERATMOSPHERIC PRESSURE DYEING PROCESS (OTHER THAN STEAM BELOW 138 DEGREES C.)
429	..Developed on the hair	476	..Steam (at 138 degrees C. or above)
431	..With fluid treatment, e.g., bleaching with dyeing, etc.	477	FOAM DYE COMPOSITION OR PROCESS
432	...-S-S- bond disruption, e.g., use of thioglycolates, etc.	478	PATTERN EFFECT DYEING, PROCESS, COMPOSITIONS, OR PRODUCTS
433	...Swelling of hair	479	..Discontinuous or multidirectional movement of substrate
435	..Solvent assisted dyeing	480	..Cross dyeing
436	..Leather dyeing	481	..Mixture of treated and untreated individual fibers
437	..Azo dye	482	..Suppress dyeing, e.g., fold, twist, wrinkle, etc.
438	PROCESS OF EXTRACTING OR PURIFYING OF NATURAL DYE	483	..Random pattern effect, e.g., space dyeing, etc.
439	..Logwood	484	..Differential diffusion
440	DYE RECOVERY PROCESS, OTHER THAN NOMINAL RECOVERY	485	..Two or more sequential dye application steps
441	PROCESS OF COLOR RENOVATING A DYED PRODUCT	486	..Direct contact with applicator
442	COLOR PROTECTING PROCESS FOR DYED PRODUCT	487	..Roller or disc
443	WEIGHTING PROCESS (LOADING SILK WITH METAL SALTS)	488	BONDING OF PREFORM, E.G., FLOCKING, ETC., WITH DYEING, PROCESS OR PRODUCT
444	DYEING PROCESS UTILIZING ELECTRIC, MAGNETIC, OR WAVE ENERGY; OR PRODUCT THEREOF	489	DRAWING OR STRETCHING OF PREFORM WITH DYEING, PROCESS OR PRODUCT
445	PROCESS OF PRINTING PERMANENTLY ON SUBSTRATE, OTHER THAN NOMINAL PRINTING, USING PRINT PASTE CONTAINING DISCHARGE MATERIAL, RESIST MATERIAL, OR DYE MATERIAL; OR STENCIL DYEING	490	PROCESS OF PRESERVING SUBSTRATE COMBINED WITH DYEING OR PRODUCT THEREOF, E.G., BIOCIDAL OR FIRE RETARDANT TREATMENT, ETC.
446	..Resist or reserve		
447	..Wax		
448	..Chemically modified local areas		
449	..Reactive dye		
450	..Oxidation dye, e.g., aniline, nitroaniline, etc.		
451	..Azo dye component ground		
452	..Mordant dye, e.g., dye with a metal chelating group, etc.		
453	..Vat dye or sulfur dye, e.g., quinonic or indigoid reducible dye, sulfur-organic reaction product dye, etc.		

113

- 491 OVERALL DIMENSIONAL MODIFICATION OR STABILIZATION, E.G., CREPING, ETC., INCLUDING USE OF CHEMICAL ADDITIVE TO FORM AT LEAST A TEMPORARY COMPOSITION, WITH DYEING PROCESS
- 492 .Solvent treatment of synthetic fibers
- 493 .Modification of molecular structure of substrate by chemical means, e.g., cross-linking of substrate, hydrolysis of substrate, etc.
- 494 NOMINAL TEXTILE MANUFACTURE PROCESS COMBINED WITH DYEING
- 495 COATING OR SIZING WITH DYEING PROCESS OR PRODUCT
- 496 .Aminoplast or aminoplast precursor coating
- 497 FORMING, SHAPING, OR RESHAPING WITH DYEING PROCESS OR PRODUCT
- 498 PROCESS OF DYEING INVOLVING DRY POWDER APPLICATION
- 499 SPRAY-DYEING PROCESS
- 500 DYEING PROCESS UTILIZING MECHANICAL PRESSURE, E.G., PRESSES, ETC.
- 501 TWO-PHASE SYSTEM DYEING COMPOSITION OR PROCESS
- 502 REPLENISHMENT OR REPLACEMENT OF SAME BATH LIQUOR IN DYEING PROCESS
- 503 DYEING PROCESS INVOLVING BURNING OF REAGENTS
- 504 PROCESS INVOLVING PLURAL APPLICATION STEPS WITH SAME DYE
- 505 DIFFERENTIAL FLUID PRESSURE ASSISTED DYEING PROCESS, E.G., AIR PRESSURE, VACUUM, ETC.
- 506 NONTEXTILE, DYEING PROCESS OR PRODUCT, INCLUDING INORGANIC FIBER
- 507 .Contact lens
- 508 .Vinyl chloride polymer substrate
- 509 .Acrylate polymer substrate
- 510 .Acrylonitrile polymer substrate
- 511 ..Contains basic addition comonomer, e.g., vinyl pyridine, etc.
- 512 .Polymer from polyol and a polycarboxylic acid or derivative substrate
- 513 .Olefin polymer substrate or rubber
- 514 ..Styrene polymer
- 515 .Polymer from isocyanate and polyol, e.g., polyurethane, etc., substrate
- 516 .Amide polymer substrate
- 517 ..Natural polyamide, e.g., casein, gelatin, keratin, collagen, etc.
- 518 .Cellulose substrate other than paper
- 519 ..Cellulose ester or cellulose ether
- 520 .Phenol-aldehyde resin substrate
- 521 .Oil, fat, wax, or gasoline dyeing
- 522 .Inorganic substrate
- 523 ..Silica or calcareous substrate, e.g., glass, etc.
- 524 DRY DYE COMPOSITION OTHER THAN MERE MIXTURE OF TWO OR MORE DYES ALONE OR PROCESS OF MAKING
- 525 .Dye soap or detergent
- 526 .Dye in specified form other than mere powder
- 527 DYE CONCENTRATE COMPOSITION WHEREIN AN ADDITIONAL AMOUNT OF A CONSTITUENT OF THE COMPOSITION MUST BE ADDED BEFORE USE
- 528 .Highly viscous dye concentrate, e.g., paste, etc.
- 529 MULTIPLE CHEMICALLY DIVERSE FIBERS OR FIBERS WITH DIFFERENT CROSS SECTION, PROCESS OF DYEING OR PRODUCT
- 530 .Resisting a fiber
- 531 .Synthetic polyamide
- 532 .Polyester fiber and cellulose fiber
- 533 .Polyester fiber and wool or silk fiber
- 534 .Polyacrylonitrile fiber
- 535 PHENOL-ALDEHYDE FIBER DYEING COMPOSITION, PROCESS, OR DYED PRODUCT
- 536 FIBER DERIVED FROM SAPONIFIED CELLULOSE ESTERS OR FROM NITROCELLULOSE CONVERTED TO CELLULOSE, DYE COMPOSITION, PROCESS, OR PRODUCT
- 537 MERCERIZED CELLULOSE FIBER OR PARCHEMENTIZED CELLULOSE FIBER DYEING COMPOSITION, PROCESS, OR PRODUCT
- 538 GELLED FIBER-DYEING PROCESS OR PRODUCT
- 539 SYNTHETIC FIBER PRODUCED FROM MATERIAL WHICH CONTAINS PENDANT -COO-, -(O=S(=O)-O-, -O-(O=S(=O)-O-, PYRIDINO, DIALKYLAMINOALKYL-, OR QUATERNARY AMMONIUM RADICAL, DYEING PROCESS OR PRODUCT
- 540 .Quaternary ammonium, pyridino, or dialkylaminocalkyl
- 541 ACYLATING AGENT OR CROSS-LINKER DYE ADDITIVE, COMPOSITION, PROCESS, OR PRODUCT
- 542 .Pretreatment of substrate
- 543 REACTIVE DYE COMPOSITION, PROCESS, OR PRODUCT
- 544 .1,2-epoxy terminal group dye or Halohydroxydye, e.g., -CH(OH)-CHCl containing
- 546 .Thiosulfato group containing dye
- 547 .Quaternary ammonium group containing dye
- 548 .Alkylene phosphate or phosphite dye
- 549 .Alkylene sulfato, halotriazine, halodiazine, haloquinoxaline, or halopyrimidine dye
- 550 ORGANIC ADDITIVE FOR DYE COMPOSITION, DYE COMPOSITION CONTAINING ORGANIC ADDITIVE, PROCESS OR PRODUCT; OTHER THAN EMULSIFIER, PH ADJUSTER OR STARCH OR GUM PRINT PASTE THICKENER
- 551 .Ethylenimine or polymer thereof or polyalkylene polyamine
- 552 .Polymeric additive
- 553 ..Derived from vinyl pyrrolidone or vinyl pyridine
- 554 ..Cationic polymer, e.g., aminated polymer without -COO-, -(O=S(=O)-, -O-(O=S(=O)-O- groups, e.g., polyacrylamide, etc.
- 555 ...Acrylamide or dialkylaminocalkylacrylate polymer
- 556 ...Cyanamide- or dicyandiamide-formaldehyde polymer
- 557 ..Acid polymer, e.g., carboxylated or sulfonated polymer
- 558 ...Acrylic acid polymer
- 559 ...Carboxyalkylene cellulose
- 560 ...Phenol-aldehyde polymer
- 561 ...Carbohydrate
- 562 ...Cellulose ester or cellulose ether
- 563 ..Polypeptide or protein
- 564 .Lactam
- 565 .Six-membered hetero ring having two or more ring hetero atoms of which at least one is nitrogen
- 566 ..Triazines (including hydrogenated)
- 567 ..Diazines (including hydrogenated)
- 568 .Six-membered hetero ring consisting of one nitrogen and five carbon atoms
- 569 ..Quinolines
- 570 .Five-membered hetero ring having two or more ring hetero atoms of which at least one is nitrogen
- 571 ..Hetero N ring contains a sulfur atom (including hydrogenated)

JUNE 1985

ORGANIC ADDITIVE FOR DYE COMPOSITION, DYE COMPOSITION CONTAINING ORGANIC ADDITIVE, PROCESS OR PRODUCT; OTHER THAN EMULSIFIER, PH ADJUSTER OR STARCH OR GUM PRINT PASTE THICKENER	622 623	.Group VA metal (As, Sb, Bi) .Group VIII metal (Fe, Co, Ni, Os, Ir, Pt, Ru, Rh, Pd)
.Five-membered hetero ring having two or more ring hetero atoms of which at least one is nitrogen	624 625 626 627 628	.Group IB metal (Cu, Ag, Au) .Group IIIA metal (Al, Ga, In, Tl) .Group IV metal (Sn, Pb, Ge, Ti, Zr, Hf) .Group VB metal (V, Nb, Ta) .Group VII metal (Mn, Tc, Re)
572 ..Hetero N ring contains an oxygen atom (including hydrogenated)	629 630	.Group IIB metal (Zn, Cd, Hg) .Boron
573 ..Hetero N ring contains at least two nitrogen hetero atoms (including hydrogenated)	631 632 633	.Nitrogen .Silicon .Phosphorus
574 .Five-membered hetero ring consisting of one nitrogen and four carbon atoms	634 635 636	.Halogen acids .Chromium
575 .Sulfur-containing hetero ring		DYE OR POTENTIAL DYE COMPOSITION, ADDITIVE, TREATMENT, PROCESS, PRODUCT, OR ANCILLARY DYE OPERATION
576 .Oxygen-containing hetero ring		.Pigments used as dyes (imbibition of a pigment)
577 ..Furyl (including hydrogenated)	637	.Mixed dyes, noncomplexed
578 ..Lactones		..Azo
579 ..Hetero ring is six-membered consisting of one oxygen and five carbons	638 639	..With sulfur dye or vat dye
580 .Fats, higher fatty acids or esters, oils or waxes, other than nitrogen-containing	640 641	..Sulfonated azo
581 .Silicon-containing	642	..Sulfur dye or vat dye
582 .Carboxylic acid esters, cyanates, isocyanates, or sulfur analogues thereof	643 644 645	..Anthraquinone dye ..Basic dye ..Inorganic dye (mineral dye)
583 ..Aromatic	646	.Dye extracted from natural product
584 .Phosphorus-containing	647	.Polymeric dye, e.g., a chromophore pendant from an addition polymer, etc.
585 .Ureas, thioureas, pseudoureas, or pseudothioureas		.Fluorescent dye, e.g., stilbene, benzimidazole, benzoxazole, benzothiazole, pyrazoline dye, etc., optical brightener or bluing agent
586 .Carboxamides or thiocarboxamides	648	.Oxidation dye, e.g., aniline, nitroaniline, etc.
587 .Sulfur-containing		.Sulfur dye or vat dye
588 ..Sulfonic acids or sulfonic acid esters		..Soluble leuco ester salts
589 ...Aromatic		..Sulfur dye (sulfur-organic reaction product dye)
590 Amino	649	..Indigoid dye
591 Acyclic		.Basic (cationic) dye containing strongly basic onium or alkylene imine group
592 ..Sulfamic or sulfonic acids, salts, or esters	650 651 652	..Heterocyclic onium group, e.g., pyridinium, etc.
593 ..Sulfonamides		.Basic dye, including diphenylmethane, triphenylmethane, xanthene, fluorene, methine, acridine, oxazine, phenazine, flavylum, naphthoperinone, quinoxaline, etc., group-containing
594 .Carboxylic acid or salt thereof		..Acid dye form, e.g., with sulfonic acid group, etc.
595 ..Tannins or tannic acid	653	..Methine group
596 ...Contains heavy metal	654	.Phthalocyanine dye
597 ..Amine		.Azo, acridone, or quinone dye
598 ..Acyclic		..Naphthoquinone dye
599 ...Hydroxy-containing	655	..Stabilized or potential diazo compound
600 ...Heavy metal-containing		..Nitrosamine or N-diazo
601 ...Halogen-containing	657	..Azo developed on the fiber
602 .Nitrogen-containing, other than nitro or nitroso		..Nitroaromatic component
603 ..Nitrile		..Pyrazolone component
604 ..Amino alcohol		..Polyazo component
605 ..Anilines		..Heterocyclic component
606 ..Quaternary ammonium compound	658	..Me-C(=O)-CH-C(=O)- group-containing
607 .Ketone		..Dye containing removable solubilizing group, e.g., lactam radical, etc., or the dye is oxidized to insolubilize
608 .Aldehyde	659	..Dye containing -COOH
609 .Ether	661	..Metallized, heavy metal
610 ..Aryl ether	662	..Anthraquinone dye
611 .Alcohol	663	..Sulfonic acid or salt thereof or sulfonamide
612 ..Chlorohydrin	664	
613 ..Phenols	665	
614 .Halogen-containing	666	
615 ..Fluorine	667	
616 ..Aromatic	668	
617 .Hydrocarbon	669	
618 INORGANIC ADDITIVE FOR DYE COMPOSITION, DYE COMPOSITION CONTAINING INORGANIC ADDITIVE, PROCESS OR PRODUCT; OTHER THAN EMULSIFIER, PH ADJUSTER, WATER, NITROUS ACID FOR AZO COUPLING OR SULFUR REDUCING AGENT FOR VAT OR SULFUR DYE	670 671 672	
619 .Ammonia	673	
620 .Ammonium salt	674	
621 .Molybdenum, uranium, or tungsten (wolfram)	675 676	

115

BEST COPY AVAILABLE

CLASS 8 BLEACHING AND DYEING; FLUID TREATMENT AND CHEMICAL
MODIFICATION OF TEXTILES AND FIBERS

JUNE 1985

	DYE OR POTENTIAL DYE COMPOSITION, ADDITIVE, TREATMENT, PROCESS, PRODUCT, OR ANCILLARY DYE OPERATION	110 111 112	..Sulfur compounds ...Peroxides or oxygen IMPROVING FELTING PROPERTIES (E.G., CARROTING)	
	.Azo, acridone, or quinone dye		ORNAMENTAL EFFECTS	
	..Anthraquinone dye	114	.Differential creping	
677	...Heterocyclic group	114.5	.With fiber destruction or removal	
678	...Phenoxo, phenol, mercapto, alkoxy, or thioalkyl group	114.6 115	.With local treatment	
679	...Anilino group on the anthraquinone nucleus	115.51	CHEMICAL MODIFICATION OF TEXTILES OR FIBERS OR PRODUCTS THEREOF	
680	..Dye containing -(O=S(=O)-O-, -O(O=S(=O)-O- or phosphorus oxide group	115.6 115.7 116.1	.With coating, sizing, or lubricating .Mixed fibers .Cellulose fibers	
681	...Sulfonated azo	181	..Treatment with nitrogen-containing organic compound	
682	Monazo		...With aminoplast condensate or aminoplast condensate-former	
683	Monosulfonated	182	Triazine-aldehyde condensate	
684	Heterocyclic		Amido-aldehyde condensate	
685	..Metallized dye, including metallization during dyeing (i.e., including in situ forming of metallized dye)	183 184 185 186	Urea-aldehyde condensate Alkylatedurea-aldehyde condensate Carbamic-aldehyde condensate	
686	...Heterocyclic	187	..Quaternary ammonium compound	
687	..Polyazo dye	188	...Heterocyclic nitrogen compound	
688	..Six-membered hetero ring having two or more ring hetero atoms of which at least one is nitrogen	189 190 191	Triazine Three-membered ring with two C and one N	
689	...Diazines (including hydrogenated)		..Cyano-, isocyan-, thiocyan-, or isothiocyan-group containing	
690	..Five-membered hetero ring having two or more ring hetero atoms of which at least one is nitrogen	192	Ethylenic radical containing	
691	...Thiazoles (including hydrogenated)	193	...Amide	
692	...Diazoles or triazoles (including hydrogenated)	194 195 196	Urea or thicurea ...Amine	
693	..-COO-alkyl or -COO-aryl hydrocarbon	116.4	..Treatment with aldehyde or ketone	
694	..Aryl-(O=S(=O)-N-	117	..Wool-like or crinkle effects	
695	..HO-C-C-N-	118	..Transparent, parchmentized, or linen finish	
696	..Carbonyl bonded directly to nitrogen		...Paper	
94.1 R	TREATMENT OF HIDES, SKINS, FEATHERS AND ANIMAL TISSUES	119	..Esterifying, etherifying or immunizing	
94.1 D	..Leather dehydration	120	...Acetylation	
94.1 P	..Phosphorus compounds on leather	121	...Xanthogenation	
94.11	..Internal tissues	122	..Cuprammonium treatment	
94.12	..Fish or reptile skins	123	..Mercerizing or alkaline treatment	
94.13	..Suede	125	...Wetting addition or pretreatment	
94.14	..Fur	127	..Treatment with phosphorus containing material	
94.16	..Depilating	127.1	..Proteinaceous fibers	
160	..Adhesive type	127.5	..Hair	
161	..Living animal	127.51	..Treatment with aldehyde, ketone or nitrogen containing organic compound	
94.15	..Treatment of untanned skins or hides	127.6	..Natural wool or silk	
94.17	..Alkaline material removal		Resin treatment of wool	
94.18	..With organic material	128 R	.Cellulose ester or ether fibers	
94.19 R	..Tanning	128 A	.Using wave energy, electrostatic field or electrical discharge	
94.19 C	...Resin condensation in situ in leather	129	..Ultraviolet radiation	
94.2	..With subsequent treatment	115.52	..Treating textiles or fibers from synthetic resin or natural rubber with chemical reactant	
94.21	...Organic material	115.53	..Single fiber or filament containing more than one synthetic organic polymer	
94.22	Fat, fatty oil, fatty acid or salt thereof	115.54	..Organic chemical reactant	
94.23	Emulsions		...Reactant contains heterocycle	
94.24	..With aldehyde-aromatic condensation product	115.55	Reactant contains nitrogen heterocycle	
94.25	..With heavy metal compound	115.56	Contains six-membered nitrogen heterocycle	
94.26	..With organic material	115.57	Reactant contains oxygen heterocycle	
94.27	...Chromium compound	115.58	...Reactant contains nonaromatic carbon-carbon double bond	
94.28	...Iron compound		Reactant containing nonaromatic carbon-carbon double bond also contains sulfur atom	
94.29	..With aluminum compound	115.59	...Organic reactant contains element other than C, H, O, N or S	
94.3	..With vegetable extract		115.64	...Organic reactant contains nitrogen
94.31	..With cellulose liberation liquor			
94.32	..With vegetable extract			
94.33	..With organic material			
101	BLEACHING			
102	..Color stripping or subduing			
103	..Wave energy			
107	..Chemical			
108 R	..Chlorine			
108 A	Chlorite, chlorine dioxide bleaching	115.64		
109	...With sulfur compounds or peroxides or oxygen	115.65		

BEST COPY AVAILABLE

JUNE 1985

- CHEMICAL MODIFICATION OF TEXTILES OR
FIBERS OR PRODUCTS THEREOF
- .Treating textiles or fibers from
synthetic resin or natural rubber
with chemical reactant
 - ..Organic chemical reactant
 - 115.66 Organic reactant contains nitrogen
 - 115.67 Organic reactant contains plural
nitrogen atoms nonbonded to each
other
 - 115.68 Reactant contains isocyanate group
 - 115.69 ..Inorganic nongaseous chemical reactant
 - 130 ..Oxidizing or alkaline agent
 - 130.1 ..Saponifying
 - 130.1 SWELLING OR PLASTICIZING OF ARTIFICIAL
FIBERS
 - 131 .Cellulose ester or ether fibers
 - 132 ..With stretching
 - 133 FIBER PROTECTING DURING FLUID TREATMENT
 - 137 CLEANING OR LAUNDERING
 - 137.5 .Removing formation impurities from
artificial fiber
 - 138 .Degumming or desizing
 - 139 .Scouring, degreasing or bowking
 - 139.1 ..With fat solvent
 - 140 .Carbonizing
 - 141 .Waste reclaiming and conditioning
 - 142 .Dry cleaning
 - 147 FLUID TREATMENT (MANIPULATIVE)
 - 148 .Confined areas
 - 149 .Intermittent length
 - 149.1 .Combined liquid and gas or vapor
 - 149.2 .Gas or vapor
 - 149.3 ..Including steam
 - 150 .Special forms and forming
 - 150.5 ..Hides, skins or leather
 - 151 ..Running lengths
 - 151.1 ..Helical textile course
 - 151.2 ...Yarns
 - 152 ...Piling
 - 154 ..Wound packages
 - 155 ...Yarns
 - 155.1 Radial liquid flow
 - 155.2 Skeins, cakes or cheeses
 - 156 ..Pulp or fibers (in bulk)
 - 157 .Kier treatment
 - 158 .Manipulation of liquid
 - 159 ..Agitating immersed material and liquid
- CROSS-REFERENCE ART COLLECTIONS
- 900 BASIC EMULSIFIERS FOR DYEING
 - 901 .Quaternary ammonium salts
 - 902 COACERVATION OR TWO-PHASE DYEING SYSTEM
 - 903 TRIPLE MIXTURE OF ANIONIC, CATIONIC, AND
NONIONIC EMULSIFIERS FOR DYEING
 - 904 MIXED ANIONIC AND NONIONIC EMULSIFIERS
FOR DYEING
 - 905 MIXED ANIONIC AND CATIONIC EMULSIFIERS
FOR DYEING
 - 906 MIXED CATIONIC AND NONIONIC EMULSIFIERS
FOR DYEING
 - 907 NONIONIC EMULSIFIERS FOR DYEING
 - 908 ANIONIC EMULSIFIERS FOR DYEING
 - 909 .Sulfonated or sulfated aliphatic
hydrocarbons
 - 910 .Soap
 - 911 ..Sulfonated
 - 912 .Arylene sulfonate-formaldehyde
condensate or alkyl aryl sulfonate
 - 913 AMPHOTERIC EMULSIFIERS FOR DYEING
 - 914 .Amino carboxylic acids
 - 915 .Amino sulfonic acids
 - 916 NATURAL FIBER DYEING
 - 917 .Wool or silk
 - 918 .Cellulose textile
 - 919 .Paper
- 920 SYNTHETIC FIBER DYEING
- 921 .Cellulose ester or ether
 - 922 .Polyester fiber
 - 923 ..Halopolyester
 - 924 .Polyamide fiber
 - 925 ..Aromatic polyamide
 - 926 .Polyurethane fiber
 - 927 .Polyacrylonitrile fiber
 - 928 .Polyolefin fiber
 - 929 CARPET DYEING
 - 930 PRETREATMENT BEFORE DYEING
 - 931 .Washing or bleaching
 - 932 SPECIFIC MANIPULATIVE CONTINUOUS DYEING
 - 933 THERMOSOL DYEING, THERMOFIXATION OR DRY
HEAT FIXATION OR DEVELOPMENT
 - 934 HIGH TEMPERATURE AND PRESSURE DYEING
 - 935 IMMUNIZATION AS A RESIST IN DYEING
 - 936 SOLUBILITY STUDIES ON DYES
 - 937 LI ION IN DYE BATH
 - 938 SOLVENT DYES
 - 939 NAPHTHOLACTAM DYE
- DIGESTS
- DIG 1 Silicones
 - DIG 2 Vinyl sulfones and precursors thereof
 - DIG 3 Swelling and stretching
 - DIG 4 Polyester fibers
 - DIG 5 Organic titanium compounds on textiles
 - DIG 6 Resin bleach
 - DIG 8 Oxirane
 - DIG 9 Polyolefin
 - DIG 10 Polyvinyl halide esters or alcohol fiber
modification
 - DIG 11 Isocyanate and carbonate modification of
fibers
 - DIG 12 Wave energy treatment of textiles
 - DIG 13 Cyanoethylation of fibers
 - DIG 14 Dry mixtures of textile reagents
 - DIG 15 Pressurized gas treatment of textiles
 - DIG 16 Pressurized and high temperature liquid
treatment of textiles
 - DIG 17 Glyoxal and polyaldehyde treatment of
textiles
 - DIG 18 Grafting textile fibers
 - DIG 19 Molten metal
 - DIG 20 -N-Cl compound
 - DIG 21 Nylon

119

BEST COPY AVAILABLE

JUNE 1985

1	MISCELLANEOUS	34.2	..With means to raise the hair and/or stretch the skin
1.5	NECKED RECEPTACLE SEAL CUTTERS	35	..With means to facilitate sharpening
2	CARTON OPENERS	36	...Permanently attached sharpener
400	CAN OPENER	37	...Means for holding or guiding sharpener
401	..With control means energized in response to activator stimulated by condition sensor	38	Blade-shifting mechanism
402	..Unicyclic reciprocating punch	39	Safety impulse
403	..With stopping upon completion of cut	40	..With blade magazine
404	...Responsive to reaction force between can and cutter	40.1	...Strip feed
405	..Responsive to can	40.2	...Detachable magazine
406	..With sanitizer	41	..With waste-collecting, razor-cleaning and/or dispensing
407	..Including spout former	41.5	...With fluid-current disposal means
408	..With other cutlery means	41.6	...Hair-collecting means
409	..Adapted for right or left hand operation	41.9	..With cooperating nipping blades
410	..With lid retainer or lifter	43	..With cooperating shearing blades
411	..With can closure means	43.1	..With razor-adjusting means
412	..Including plural independent cutters	43.2	...Adjusting spacing between blades
413	..Progressive fulcrum	43.3	..With compound movement of blade
414	..Including punch	43.4	..Rotary blade
415	..Including plural sequentially operated cutters	43.5	...Rotary inner blade
416	..With driven roller to continuously engage bead and relatively rotate can and opener	43.6	And stationary outer blade
417	..Side cut	43.7	...Oscillating blade
418	...Cutter comprising driven disc	43.8	...Oscillating inner blade
419	..With means enabling quick release of cutter	43.9	And stationary outer blade
420	..Roller drive means causes initial piercing	43.91	..Reciprocating inner blade
421	...Including prime mover	43.92	...And stationary outer blade
422	...Cutter comprising rotatable disc	42	..With blade-moving means
423	...Including prime mover	44	..Vibratory
424	...Cutter comprising rotatable disc	45	...Electric
425	...Driven disc	46	...Traction
426	..Cutter comprising rotatable disc	47	..Knockdown and/or folding
427	...Driven disc	48	..Inclined edge
428	..Including shear couple	49	..Curved edge
429	..Progressive fulcrum	50	..Multiple blade
430	..Side cut	51	..Detachable blade, guarded cutting edge
431	..Cutter pivoted to reaction member	52	...Tensioned blade edge
432	..With guide	53	..Longitudinal or old style
433	..With means to relatively rotate can and opener	54	...With relative blade and guard adjustment
434	..Comprising means to rotate can	55	...Separable guard
435	..Including sweep cutter	57	..Pivoted blade
436	..With can support	58	..Pivoted cap
437	..With can penetrating pivot	59	...Multiple guard
438	...Variable cutter radius	60	...With operator and relative blade and guard adjustment
439	Freely slidable cutter	60.5	Sectional cap
440	Cutter comprising rotatable disc	61	...With operator and relative blade and guard adjustment
441	Cutter comprising rotatable disc	62	..Slidable blade
442	..With means to grip can	63	...With relative blade and guard adjustment
443	..Including punch	64	...With blade lock
444	..With prime mover to drive cutter relative to can	65	...Multiple guard
445	..Peripheral punch	66	...Slidable lock
446	..Plural-spaced cutting edges	67	..Hook and lock
447	...With can support	68	..Bolt-connected
448	..With can support	69	...Threaded
449	..Traversing punch	70	...Multiple guard
450	..And fulcrum	71	With relative blade and guard adjustment
26	MANICURE	72	Flexible blade
27	..Guarded edge	73	Spaced guard edge
28	..Nippers	74	..Magnetic
29	..Shears	74.1	..Multiple guard
29.5	HAIR CUTTERS FOR INSIDE NOSE OR EAR	75	..Aligning means
30	HAIR PLANERS	76	..Corner construction
31	..Convertible	77	..Guards
32	RAZORS	78	...Blade-supported
34 R	..Combined	79	With relative blade and guard adjustment
34 A	...Blade indicia	80	Rail guard
34 B	...Blade flexure indicia	81	...Edge structure
34.1	..With additional cutter means	82	...Modified teeth
		83	...Rail
		84	..Caps
		85	..Handles

JUNE 1985

	RAZORS	106	Wedge
	.Handles	107	Screw feed
86	..Receptacle	108	...Pivoted lever mounted
87	..Pivoted	109	CIGAR TIP CUTTERS
88	...Longitudinal	110	.Rotary power source
89	...Angularly adjustable handle and head	111	.Hand
90	.Attachments and accessories	112	..Pivoted blade
451	STATIC PENCIL SHARPENER	113	..Reciprocating blade
452	.Plural, sequentially engaged cutters	113.1	CORE-PIT REMOVERS
453	.With debris receiver	113.2	.Including pivoted tool-pair members
454	..Conical or cylindrical work guide	113.3	.Combined
455	..Surface type cutter	114	SEGMENTERS
456	.Work piece drawn over transverse, single edge cutter	115	PLASTIC MATERIAL CUTTERS
457	.Having conical or cylindrical work guide	116	.Wire
458	..And mounting base or handle	117	..Plural
459	...With diverse feature	118	BUTTONHOLE TYPE
460	..Open-ended for point protection during writing	119	.With punch
461	..Adjustable or resilient cutter structure	120	.Shears
462	..Surface type cutter	120.1	SHELL OPENERS
475	POWERED PLANER	120.2	.Nutcrackers
476	.With rolling supports (e.g., wheels, casters)	120.3	..Arcuately moved jaws
477	.Tool rotates about axis perpendicular to work	120.4	...Plural or relatively movable pivot
478	BENCH PLANE	120.5	..Lever-actuated jaws
479	.Core box former type	358	PERFORATING OR INDENTING IMPLEMENTS
480	.Strip cutter	359	.Combined with other type cutter
481	.With gauge or guide	360	.With portion positioned in work aperture
482	.Having plane extension	361	.Work-mounted
483	.With lubricant dispenser	362	.Hand-guided, motor-driven
484	.To form configured or beveled surface	363	.Pivoted handles
485	..Changable	364	..Turret of tools
486	..Recess forming	365	.Traveling roller
487	.Having means for adjusting cutting blade	366	.Pointed
488	..Pivoted lever and screw	367	..With impact drive
489	..Screw	368	..With stripper, sheath or gauge
490	..Adjustable mouthpiece	121	TREE HACKS
491	.Handle or handle attaching means	121.5	CORN STRIPPERS
492	.Cutting blade clamp	122	CONVERTIBLE
493	.Cutting blade	123	COMBINED
494	BILLIARD CUE TRIMMER	123.3	.With means to apply transient fluid to tool
495	CYLINDRICAL TENON CUTTER	123.4	..To chain saw chain or guide therefor
90.1	MEANS FOR CUTTING ELONGATE, STRAND-ENCIRCLING SHEATH	123.5	.With skin-removal means
90.2	.Helically wound metal sheath	123.6	..Including relatively movable parts
90.3	..Including rotary cutter	123.7	..Including a pointed blade
90.4	..Longitudinally	124	.With material-holder or disposal
90.6	..With additional means for cutting sheath other than longitudinally	125	..Handle receptacle
90.7	..Adjustable to also cut sheath other than longitudinally	127	..Twine guide
90.8	..With cutter-opposing, sheath-engaging surface	128	..Ejectors or strippers
90.9	...Roller surface	129	...Fork
91.1	...Pivotally connected to cutter	130	...Annular cutter
91.2	.With cutter-opposing, sheath-engaging surface pivotally connected to cutter	131	..Shears
92	PIPE AND ROD CUTTERS	132	...Multiple shearing position
92.5	.Adapted to cut pipe or rod longitudinally	133	Suction-disposal means
93	.Rotary	134	...Grip type
94	..External	135	Spring-opened
95	...Pipe- or rod-encircling	136	..Knives and scrapers
96	With clamping means	136.5	...With closure or portable receptacle support
97	Rotary power source	137	..Forks
98	Ratchet	138	.With sharpening feature
99	Ratchet	139	..Rotary sharpener
100	Chain link type	140	.With heater
101	Disc cutter	141	.Spoons with fluid conductors
102	...Disc cutter	142	.Cutlery
103	..Internal	143	..Sheathed
104	...Eccentrically pivoted	144	..Saws
105	...Slidably projected	145	..Nippers and shears
		146	..Shears and knives
		147	..Knives, forks, and spoons
		148	..Knives and forks
		149	..Knives and spoons
		150	..Forks and spoons
		151	SHEATHED
		152	.Plural blade
		153	.Folding sheath
		154	.Compound blade movement
		155	.Pivoted blade

119

BEST COPY AVAILABLE

JUNE 1985

	SHEATHED	519	Angularly adjustable
	.Pivoted blade	520	Double grip
156	..Detachable blade type	521	Spindle type (e.g., for double end cross-cut saw)
157	...End tang connected		Having side clamping plates
158	..With blade-opening means	522	Fastener passes through transverse passage in handle
159	...Spring-opened	523	Fastener passes through longitudinal extending passage in handle
160	...Locked blade		Scroll type
161	..Locked blade	524	Cold chisels
162	..Sliding blade		..Chisel
163	..Gravity-opened	525	..Compound
164	.Elements	168	..With gauge
164.5	ICE PICK OR CHIPPER TYPE	167	..Scrapers
164.6	..With impact-moving means	167.1	..Wheeled
164.7	..With guard and/or guide	167.2	..Hoe type
164.8	..Plural points or edges	169	..Plural blade
164.9	SCRATCHING IMPLEMENTS	170	..Plural cooperating blades
164.95	..Having traction-rotated tool (e.g., glass cutters)	171	..Corer type
165	CUTTING TOOLS	172	..Nippers
166 R	..Saws	173	..Multiplex
166 A	...With work-affixing means	174	...Adjustable-position cutter
369	..Including contiguous oppositely moving blade portions	175	...Form cutter
370	..With work-underlying guard means	176	...With guide and/or gauge
371	..With work-engaging member	177	...With motor
372	...Affixed to work	178	...Compound blade movement
373	...Slidable guide plate parallel to saw blade	179	...Reciprocating blade
374	...Slidable guide plate intersected by saw blade	180	Lever and cam
375	Including relatively adjustable saw blade and guide plate	181	Lever and link
376	To vary angle between saw and guide plate	182	Toothed slide and lever
377	To vary projection of saw blade	183	...Pivoted blade
378	...Including means to press work to saw blade	184	With blade-moving means
379	..On vehicle moved during cutting	185	One movable blade
379.5	..On vehicle, moved relative thereto during cutting	186	Lever and cam
380	..Band	187	Lever and link
381	..Chain	188	Pivoted handles
382	...With guard means	189	Handles interlinked or geared
383	...With guide bar for cutting span	190	Common pivot
384	Including nondriving guide pulley	191	..Shears
385	And means to adjust guide pulley relative to guide bar	192	...Hair thinners
386	Including means to adjust guide bar relative to its support	193	...Multiple shearing position
387	Multisectioned guide bar	194	...Multiplex
388	..Rotary	195	...Body-supported
389	...With peripheral drive means	196	...Adjustable angle
390	...With guard means	197	With cut regulator
391	...Movable to nonguarding position	198	Adjustable
392	..With means to reciprocate saw	199	Automatic
393	...In uniplanar compound path	200	Convertible, power- or manual-operated
394	...Including connecting rod articulated with saw blade or support	201	Compound blade movement
501	..Having plural cutting edges	202	Rotary blade
502	...Oppositely directed cutting edges	203	With motor
503	...Simultaneously cutting	204	With blade-tension means
503.5	Parallel cutting	205	Reciprocating and/or oscillating blade
504	..Having tooth or blade protective or strengthening means	206	Reciprocating or oscillating power source
505	..With gauge for limiting depth of cut	207	With motor
506	..Mounted in truss frame (e.g., bucksaw)	208	Pivoted handles
507	..Mounted in U-frame	209	With spring return
508	...Offset blade	210	And blade-tension means
509	...Coping saw	211	With blade-tension means
510	...Extensible	212	Rotary power source
511	Length and depth	213	With motor
512	Collapsible frame	214	Crank or cam, pitman and lever
513	...Blade-tensioning means	215	Crank or cam, lever and slide
514	..With accessory and handle	216	Crank or cam and lever
515	...Lubricant dispenser	217	Crank or cam and slide
516	...Dust blower	218	With blade-tension means
517	...Handle	219	And friction reducing feature
518	Offset	220	Blade assembly
		221	With friction reducing feature
		222	Blades
		223	...Multiplex
		224	With blade-moving means
		225	With motor
		226	
		227	
		228	

	CUTTING TOOLS		
	..Plural cooperating blades	300	..Sweep cutter
	..Shears	301	..Annular blade
229	...Form cutter	302	...With radiating or crossed blades
230	...Zigzag	303	..Radiating or crossed blades
231	...With supports	304	..Parallel blades
232	...Hand or finger	305	...Push or stamp type
233	...With guard, guide and/or gauge	306	..Traveling roller cutter
233.5	...Comb type	307	...Disc blade
234	...Spring joint	308	..Cleaver type
235	...Offset handles and blade	308.1	..Hatchet, ax, or adze
236	...Detachable blade	308.2	..Foldable to cover bit
237	...Compound blade movement	308.3	..Detachable bit
238	...One movable blade	309	..Sickle or scythe type
239	...Intermediate pivct	310	..Sweep cutter
240	...Rotary blade	312	..Plural handle or grip
241	...Reciprocating blade	313	..Draw knives
242	...Lever and link	314	..Push and/or pull type
243	...Toothed lever and slide	315	...Push or stamp type
244	...Pivoted blade	316	...Annular blade
245	...With blade-moving means	317	..Pull type
246	Push or pull type	318	..Swing stroke type
247	Rotary power source	319	..Traveling roller blade
248	Offset blade and handle	320	..Adjustable blade
249	One movable blade	321	..Pivoted
250	Pivoted handle	322	FORKS
251	Lever and connecting link	323	..With hand guard and/or support
252	Pivoted handles	324	SPOONS
253	End pivct	325	..Perforated
254	Intermediate pivct	326	..With cover and/or guard
255	Foldable	327	..With support
256	Right or left hand	328	..Reinforced
257	Offset blade and handle	329	HOLDERS FOR DETACHABLE BLADES
258	Blade and slot	330	..Pivoted part
259	Offset pivct	331	..End pivct
260	Detachable blade and handle	332	..Knockdown holders
261	Spring opened or closed	333	...One movable side
262	With latch	334	..U-strap holder
263	..Rotary blade	335	..Sliding-blade assembly
264	..With motor	336	..Spring jaw type
265	..Two rotary blades	337	..Interlocked blade and holder
266	..Joints and blade-tension means	338	..Spring jaw type
267	..With friction-reducing feature	339	..Apertured blade
268	..Spring tension	340	HANDLES AND BLADE CONNECTIONS
269	..Threadless pin type	341	..Shear or nipper type
270	..Nut lock type	342	..Blade connections
271	..Stops and bumpers	343	..Cast-on handle
272 R	..With blade-moving means	344	..Welded, riveted or bolted
272 A	..Electric	345	MATERIALS
273	..Base-supported	346	BLADES
274	..Band knife	346.5	..Razor blade
275	..With presser foot	346.51	..Cutting couple element
276	..Rotary blade	346.52	..Having indicia
277	..Impact	346.53	..Of specific material
278	..With material receiving opening	346.54	...Including metallurgical characteristic
279 R	..Plural blade or cutting edge	346.55	...Including details of cutting edge
279 A	...Swinging-stroke weed cutter	346.56	...Toothed or waved edge
280	..Push or pull type	346.57	...Having three or more cutting edges
281	...Spcke shave type	346.58	..Composite razor blade
282	..With blade guide	346.59	...Interfitting sections
283	..Adjustable	346.6	..Reinforces
284	..Detachable guard	346.61	..Apertured, notched or lugged
285	..Detachable guard	347	..Rotary
286	..With guard and/or guide	348	..Reinforced
287	..Plural blade or cutting edge	349	..Detachable cutting edge
288	..Diverse kinds	350	..Metallurgical feature
289	..Blade or material guide	351	..Apertured, notched or lugged
290	..With support	352	..Reamer type
291	...Hand- or finger-supported	353	..Plural cutting edge
292	...Traveling roller blade	355	..Toothed or waved
293	...Adjustable	356	..Longitudinally curved
294	...Push or pull type	357	..Edge structure
295	..Hand guard	500	IMPLEMENTS ADAPTED TO BE DRIVEN BY
296 R	..With support or attaching means		DETACHABLE PORTABLE POWER-DRIVE MEANS
296 A	..Nonuse support		(E.G., ELECTRIC DRILL)
297	..Leg- or foot-supported		
298	..Hand- or finger-supported		
299	..Plural blade		

CLASS 30 CUTLERY

30-5

JUNE 1985

DIGESTS

DIG 1 Rechargeable battery operated
DIG 2 Dry shavers
DIG 3 Envelope openers
DIG 4 Explosive
DIG 5 Lawn edgers
DIG 6 Resilient means
DIG 7 Sprinkler and cutter
DIG 8 Seam rippers

JUNE 1985

1 R	MISCELLANEOUS	23 F	...Plural reproduction
1 A	..Aerial photo	23 G	...Pattern grading
1 B	..Printed sheet	23 H	...Pattern follower
1 C	..Curve and chart analysis	23 M	...Human form
1 D	..Indexing and verniers	23 J	...Telautographs
1 E	..Dip and strike	23 K	...Template and stylus details
1 F	..Article subdividing	24 R	..Multiplane
1 G	..Layout	24 B	Pendulum
1 H	..Earth	24 C	Coaxial styli
1 K	..Copy aids and perspective drawing	25 R	..Parallelogram type
1 M	..X-Y motion	25 B	Simple parallelogram
1 N	..Angular measurement	25 C	Universally parallel bar
1 L	..Optical readout	25 D	Progressive lettering
1 P	..Sonic wave	25 E	Tandem pantographs
1 Q	..Railroad	26	..Compound curved and straight-line
1 S	..Statistical measurements	27 R	..Curved line
1 T	..Theodolite-optical readout	27 B	...Circle-pivoting leg
1 V	..Volume measurement	27 C	...Circle-beam compass
1 AA	..Tables-layout	27 D	...Circle-frame support
1 BB	..Inspection	27 E	...Circle-roller
1 CC	..Remote point locating	27 F	...Circle-pin and jointed arm
1 DD	..Light direction	27 G	...Circle-rotating table
1 HH	..Seismic	27 H	...Conic section
1 LE	..Line engaging	27 M	...Spiral
1 MP	..Multipolar	27 J	...Sine curve
1 SP	..Radius and spiral	27 K	...Pattern followers
1 PT	..Angular position transducer	27 L	...Rose engines
1 AP	..Angle polysection	28	..Lens
1 SB	..Simulating calculators	29	..Stair
1 SA	...Spherical	30 R	..Ellipsographs
1 SC	...Astronomical	30 B	...Pattern followers
1 SD	...Flat multisheet	30 C	...Pivoted circular pattern
1 CF	..Character forming	30 D	...Harmonic component
2 R	APPAREL	30 E	...Flexible cord type
2 H	..Hems and cuffs	30 F	...Sliding leg
2 A	..Stocking gauge	30 G	...Planetary scriber arm
3 R	..Footwear	31	...Right-angle guides
3 A	...Single measuring or indicating means	32 R	..Straight-line
3 B	...Multiple indicating means, independent	32 B	...Portable
3 C	...Multiple indicating means interconnected	32 C	...Moving scriber
4	..Laying out	32 D	...Stationary scriber-moving support
5	...Patterns	32 E	...Stationary scriber moving sheet
6	..Processes	32 F	...Moving scriber and sheet
7	..Leveling features	32 G	...Sheet support and handling details
8	..Stand supported	33	..Clapboard
9 R	..Skirts	34	..Ink
9 A	...Power-marking	35	...Traveling markers
10	...Platform	36	...Rotary
11	..Laying out	37	...Rotary markers
12	..Patterns and charts	38	...Blank space
13	...Perforated	39 R	...Blank space
14	...Adjustable	39 B	Hand pen
15	...Conforming	40	..Set shift
16	..Adjustable	41 R	..Parallel line
17 R	..Processes	41 B	...Lettering guide
17 A	...Pattern grading	41 C	...Rotary markers
18 R	SCRIBERS	41 D	...Multi-marking
18 B	..Writing	41 E	...Profile tracing
18 C	..Perspective drawing	41 F	...Single marker with spacing guide
19 R	..Graduating	42	..Edge guided
19 A	...Straight line	43	...Bevel set
19 B	...Circular	44	...Multimarkers
20 R	..Sight-line controlled	45	...Machine type
20 B	...Course tracking	227	STRAIGHTLINE LIGHT RAY TYPE
20 C	...Perspective view tracing	228	..Process
20 D	...Stereoscopic mapping	229	..Aerial bomb sight
21 R	..Curved surface	230	...Gyroscopically stabilized
21 B	...Spherical	231	...With ground speed indicator
21 C	...Pipe elbow	232	..Marine or aircraft ground speed indicator
21 D	...Tumbler engraving	233	..Gun sight
22	..Pantographic	234	..Bore type
23 R	..Pantographic	235	...Ordnance
23 B	...Single beam	236	...Gyroscopically stabilized
23 C	...Superposed carriages	237	...Self adjusting gun movement compensator
23 D	...Sliding pivot	238	Compensates for moving target
23 E	...Opposite replica	239	And moving craft or gun platform

STRAIGHTLINE LIGHT RAY TYPE	306	..Fluid (e.g., drilling fluid, etc.) responsive
..Gun sight	307	...Varied pressure or pressure pulses representative
..Ordnance	308	..Pendulum mounted or directed marker
...Self adjusting gun movement compensator	309	...Radiant energy or electrically produced marking
240 Compensates for trunnion tilt	310	...Includes magnetic directional indicator
241 ..Illuminated or luminescent	311	...Record movable to marking position
242 ..Critical material	312	..Electrical telemetering to read-cut
243 ...Colored	313	..Inclination and direction indications
244 ..Hood or cover	314	..Indicator image projected on sensitized record (e.g., photographic, etc.)
245 ..Telescopic type	315	..Thermally sensitive
246 ...Having adjustable reticle	316	..Gyromagnetic compass
247 ...Movable relative to base	317 R	..Electrical telemetering
248 Vertically and laterally adjustable	317 D	...Differential disparity correction
249 Movable to non-use position	318	..Gyroscopically controlled or stabilized
250 ...Readily detachable (i.e., knockdown)	319	..Magnetic compass
251 ...Having variable size sight aperture	320	..Geographic position indication (i.e., latitude or longitude)
252 ...Movable relative to base	321	..Plural gyroscopes (e.g., reference platform, etc.)
253 ...Plural sights, pivotally selective	322	...Diverse indications
254 ...Vertically	323	...Directive gyroscope stabilized by auxiliary gyroscope
255 And foldably	324	..Gyroscopic compass
256 And laterally	325	...Transmission system for remote readout
257 And laterally	326	...Selective correction for deviation
258 Rectilinearly	327	...Fluid, suspension or control
259 Non-rectilinearly	328	..Attitude indicator (i.e., pitch or bank)
260 Pivots about transverse axis	329	...Gyroscope mounted, lever indicator and skyplate
261 ..Multisight	330	...Spherical indicator
262 ..Body related	331	..With recorder
263 ..Structurally installed	332	..With marker
264 ..Vehicle	333	..Structurally installed including relation to feature thereof
265 ..Archery bow	334	..Hand implement (e.g., tool, rifle, camera, etc.)
266 ..Camera	335	..Vehicle running gear, or headlight, inclination
267 ..With telemetric means	336	..Wheel supported
268 ..Celestial	337	..Axle supported
269 ..Time computing	338	..Railway rail spacing and inclination
270 ...Including gnomonic indicator (e.g., sundial, etc.)	339	..With cord type straight line guide or holder therefor
271 And compass	340	..With measurement in plural directions or of shape
272 ..With magnetic compass	341	..With variable angle indication
273 ..And level or plumb	342	..With independent linear measurement
274 ..With straight edge instrument or chart	343	..With angle or shape determination
275 R ...Combined	344	..With damper or governor for sensor
275 G ...With gyroscope	345	..Magnetic
276 ..Multisight line	346	..Fluid
277 ..Common viewpoint	347	..Attaching means (i.e., adhesive, magnetic or vacuum viewing aid)
278 ..Relatively movable	348	..With viewing aid (i.e., illuminator or illumination director)
279 ...Angularly and rectilinearly	348.2	..Spirit level electric illuminator
280 ...Each separately adjustable	349	..With preselected direction indicator
281 ..Vertical and horizontal angle measurer	350	..With protector or shock absorber
282 ..Vertical angle	351	..Diverse directional indicator
283 ..Having gravity responsive indicating means (e.g., pendulum, etc.)	352	..Includes magnetic compass
284 ..Including distance finding feature	353	..Line plumb and bubble level
285 ..Horizontal angle measurer	354	..Combined
286 ..Alignment device	355 R	..Magnetic field responsive
287 ..Railway track	355 D	...Dip aligning needle
288 ..Vehicle chassis, running gear or headlamp	356	..Error indicator, preventor, or compensator
289 ..Game ball (e.g., football, etc.)	357	...Error-producing-field minimizing
290 ..Level (i.e., surveyor's type)	358	...Adjustable positioned permanent magnet
291 ..Self leveling	359	Pivoted adjustment
292 ..With tubular sighting means (e.g., telescope, etc.)		
293 ..Rod or target		
294 ..Self computing type rod		
295 ..With leveling or plumbing adjunct		
296 ..Extensible rod sections		
297 ..Reticle		
298 ..Adjustable		
299 ..Instrument support		
300 INDICATOR OF DIRECTION OF FORCE TRAVERSING NATURAL MEDIA		
301 ..Process		
302 ..Borehole or tube interior study		
303 ..Including calculation or comparison		
304 ..Borehole direction or inclination		
305 ..Etching or marking liquid determines orientation		

JUNE 1985

INDICATOR OF DIRECTION OF FORCE		411	.Clapboard marking
TRAVERSING NATURAL MEDIA		412	.Shaft aligning
..Magnetic field responsive		413	.Cord type
360	..Utilizing cathode-ray tube or photoelectric cell	414	..With chalking feature
361	..Electro-magnet or inductor (e.g., flux valve, etc.)	415	.Multiplane angularly adjustable
362	...Inductor rotated or vibrated	416	..Roof framing
363 R	..Electrical telemetering	417	...Having rafter cut indicia (e.g., pitch, rise, etc.)
363 K	Photoelectric pickoff	418	.Square and pivoted straightedge
363 L	Electrical contact pickoff	419	..And sliding
363 N	Electrolytic liquid pickoff	420	..Straightedge as a hypotenuse of the square
363 Q	Resistance, capacitance or inductance pickoff	421	...Having angle or slope indicating means
363 Y	Fluid jet or pressure pickoff	422	..Having circumferential pivot, only
364	..Liquid buoyed magnetic needle	423	..With indicia for rafter cuts
365	.Level or plumb, terrestrial gravitation responsive	424	..With protractor
366	..Electrically actuated signal or indicator	425	...And sliding straightedge
367	..Plural, similar, separable liquid columns system	426	...Located on straightedge
368	..Arresting means for movable indicator	427	.Square and sliding nonpivotal straightedge(s)
369	..Line level type	428	..Straightedge bisects right angle of square (i.e., centering square)
370	..Work, or workman, attaching means	429	.Square and fixed straightedge
371	...Requiring no modification of the work	430	.Base attached
372	Elastic bias type clamping	431	..Navigation
373	Encircling clamp, loop, or strap	432	..Perspective drawing
374	..Relatively movable, coacting, reference-surface sections	433	...With T-square straightedge
375	...Affecting level or plumb indication	434	...With parallel straightedge arrangement (i.e., drafting machine)
376	..Add-on-type reference-surface section	435	..Rotary base
377	..Liquid type, upper surface utilizing	436	..Linear counter rule
378	...Float or piston	437	..With guide or catch for T-square type
379	...Bubble	438	..Universal parallelism arrangement
380	Adjustable size	439	...Wheel and band
381	Plural	440	With counterbalance
382	Coacting at an angle	441	Double linkage
383	Relatively adjustable	442	With counterbalance
384	Liquid container adjustable on reference-surface section	443	..Both ends connected
385	Cam type adjuster (e.g., gear, screw, wedge, etc.)	444	...By cord and roller
386	Opposing spring	445	...By rack and pinion
387	Adjustment indicium	446	...One end moveable along straightedge
388	Adjustment indicium	447	..Set shift, positively
389	Bubble-position indicia on reference-surface section	448	.With means for moving straightedge over a surface
390	Universal, or plural indicating sections on container	449	..By rollers
391	..Pendulum	450	..Set shift
392	...Plumb line (i.e., flexible, line suspended plumb bob)	451	.Combined with level
393	Line take-up reel	452	.Plural straightedges, relatively moveable
394	Spring biased	453	..Triangulation (e.g., solving trigonometric functions)
395	...Plural, coacting in intersecting planes	454	..Parallel type
396	...Liquid buoyed	455	..Intercontrolled bevel blades
397	...Gimbal mounted	456	..Multipivoted straightedges
398	...Weight, variable quantity or center of gravity	457	...Navigational
399	...Indicium adjustably fixed to reference-surface section or to weight	458	...Folding rule type
400	Cam type adjuster (e.g., gear, screw, etc.)	459	...Two straightedges pivoted at the ends of a central straightedge
401	...Motion transmitting mechanism drives indicator	460	At least one pivot is sliding
402	...Means limiting swing	461	Central straightedge longitudinally adjustable
403	STRAIGHTEDGE TYPE	462	Central straightedge longitudinally adjustable
404	.Wall guide and plumb (e.g., building construction)	463	Three straightedges forming a triangle
405	..Batter board type	464	..Sliding
406	..Adjustable vertically	465	..Single pivot
407	..Building is the vertical support	466	...Handsaw attachment
408	...Connected to brick	467	...Lettering guide
409	By line tension only	468	...T-head with pivoted straightedge
410	Having adjustable clamp	469	Locking
		470	Sliding
		471	...With angle indicating means
		472	...Pivoted straightedge and sliding nonpivoted
		473	...Sliding pivotal adjustment

125

BEST COPY AVAILABLE

STRAIGHTEDGE TYPE		
474	..Plural straightedges nonadjustably fixed at right angles (e.g., T-square, triangles, squares)	143 G ...Stem caliper
475	..With right angle truing adjustment	143 H ...Limit gauges
476	..With special scale markings	143 M ...Slide calipers
477	..Lettering guide	143 J ...Slide calipers; locking
478	..Folding or separable	143 K ...Slide calipers, slide actuator
479	..T-square	143 L ...Electrical indicator
480	..Try square	144 ..Track
481	..Multiplane	146 ...Dial
482	..Plural nonadjustable straightedges forming non-right angles	147 R ...Dial
483	..Rules	147 B Leather grading
484	..With attachment	147 C Liquid column indicator
485	...For performing diverse function	147 D Extensometers
486	...Index	147 E Bench type
487	...For subdividing	147 F Manual actuator
488	...Optical (e.g., magnifying)	147 G Screw adjustment-comparator
489	...For supporting above work surface	147 H Slip on comparator
490	...Located on end	147 T Beam trammel
491	...Selectable	147 J Beam trammel-comparator
492	..Edge details	147 K Internal
493	..Particular material	147 L Continuous gauging
494	..Special scale markings	147 M Screw and gear testing
495	..Pivot joints	147 N Electrical indicator
496	..180 degree limit	148 R ...On pivoted type
497	...Locking	148 B Leather grading
498	..90 degree limit	148 C Liquid column indicator
499	...Locking	148 D Extensometers
500	..Locking	148 E Calipers
121	AREA INTEGRATORS	148 F Calipers-comparator
122	..Planimeters	148 G Cam and anvil
123	..Electrical	148 H Electrical indicator
124	..Rolling contact	149 R ...Pivoted
125 R	DISTANCE	149 B Multi-leg
125 A	..Optical	149 C Micrometer tip
125 B	..Bore extensometers	149 D Removable tip
125 C	..Grid counting	149 E Pivoted tip, plural
125 T	..Temperature compensating	149 F Pivoted tip
125 M	..Rolling contact-machine tool	149 G Pivoted tip, micro-adjustment
125 W	..Measuring by waves	149 H Pencil clamp
126	..Sounding type	149 J Electrical indicator
126.4 R	..With sampling	150 ...Proportional
126.4 A	Sampling line and lead	151 ...Point parallelizing
126.5	..Line and lead type	152 R ...Extensible leg
126.6	...Automatic reel	152 B Pencil clamp
126.7 R	..Ullage rods	152 C Axial adjustment
126.7 A	Rod adjustable to surface	152 D Drop pen
127	..Fabric and cord	153 R ...Joints and setters
128	..Bolt	153 B Pivot lock
129	..Rolling contact	153 C Fixed radial arm
132 R	...Predetermined stop or signal	153 D Step-by-step
132 A	Motor control	153 E Concentric arc
133	...Computing	153 F Link adjusters
134 R	...Non-feeding	153 G Spiral or helical cam
134 A	Load controlled indicator	154 R Screw adjustment
136	..Predetermined stop or signal	154 B Micro-indicator
137 R	..Tape	154 C Quick adjusting
137 L	...Elastic scale	154 D Differential screw
138	..Reel feature	154 E Rotating screw
139	...Dial	154 F Opposed threads
140	Computing	154 G Rotating nut
141 R	..Rolling contact	155 Tangent
141 B	...Mill type	156 R Median
141 C	...Rotating screw	156 B Sliding wedge
141 D	...Wheel on screw	157 ...Median handle
141 E	...Single wheel	158 ..Beam-trammel type
141 F	...Endless belt	159 ...Screw adjustment
141 G	...Tube inside	160 ...Pivoted trammel
141.5	...Combined	161 ..Extensible-rule type
142	...Computing	162 ..Adjustable wedge
143 R	..Opposed contacts	163 ..Screw adjustment
143 B	...Butter fat testers	164 R ...Micrometer
143 C	...Anatomical calipers	164 B Differential screw
143 D	...Tire calipers	164 C Inside measurement
143 E	...Inclined plane	164 D Inside-outside
143 F	...C-frame and plunger	165 Preliminary setting
		166 ...Particular indicator
		167 Attachments
		168 R ...Fixed
		168 B Pre-adjustment

JUNE 1985

	DISTANCE		
169 R	.Single or offset contact	504	.With computer responsive to contact probe
169 B	...Depth gauges	505	.Having program control or an analogue to digital device
169 C	...Center testing	506	.Target, weapon or weapon projectile
169 D	...Weld gauges	507	.Lens
169 F	...Coating thickness measurement	508	.Golf stance, swing or club analysis
170	..Screw adjustment	509	.Bowling ball
171	...Pivotal	510	..Grip
172 R	..Dial	511	.Anatomical
172 B	On pivoted	512	..Human
172 C	Liquid column indicator	513	...Dental
172 D	Center locating	514	...With mouth or teeth contact
172 E	Electrical indicator	515	...Having a support or foot locator for body
172 F	Reeled material rider		
173	..Attachment type	516	.Point reproducer
501	GAUGE	517	.Bearing or bearing part
175	..Conformator	518	.Masonry construction
176	..Flexible band	519	.Cam profile or keyway
177	..Curve-ruler type	520	.Center, point, distance between centers or centerline location
178 R	..Circular size	521	.Earth profile or road grade or shrub or tree trim guide
178 B	..Fixed	522	..Container
178 C	...Liquid column indicator	523	.With conveying wheel support
178 D	...Straddle type	524	.Food portion
178 E	...Electrical indicator	525	..Pie, cake, cheese, pizza or sandwich portion
178 F	...Borehole type	526	.Flooring, floor or wall covering or molding
179	..Flexible band	527	..Floor covering
179.5 R	..Spur gearing type	528	.Wall panel outline marker for utility
179.5 A	...Calipers	529	.Pipe layout or fitting
179.5 B	...Mating master-linear displacement	530	.Pitchometer
179.5 C	...Mating master-angular displacement	531	.Taper
179.5 D	...Involute form	532	..External
179.5 E	...Comparator	533	.Straightness, flatness or alignment
180 R	..Collocating	534	.Angle
180 B	...Connecting, rod, crankshaft	535	..Squareness
180 AT	...Automotive (other)	536	..Sine, cosine or tangent bar
180 L	...Light, headlight testing	537	...Article support
181 R	..Machine parts	538	..Fixed pivot at one end
181 AT	...Automotive	539	.Lock or key
182	...Rolls	540	..Cylinder lock tumbler decoder
183	...Typewriter	541	.Postage stamp or mechanical coupling gauge
184	..Watch	542	..Internal
184.5	..Printing members	543	..Concentricity or eccentricity
184.6	..Hand stamp	544	..Earth cavity or tube
185 R	..Tool	545	.Comparison with a standard
185 V	...Vehicular	546	..Profile
186	...Shears	547	...Optical comparison
187	..Clapboard	548	.Plural tests
188	..Shingle	549	.With support for gauged article
189	.Point markers	550	..Concentricity
190	..Button or buttonhole	551	..Profile
191	..Center	552	...Having plural contact members
192	..Proportional	553	...Member contacts successive points on the article
193	.Axle	554	With recording of contact member position at each point on the article
194	.Door and window	555	..Having indicator of probe position or movement
195	.Hocf	556	.Having a movable contact probe
196	.Millstone	557	..Plural probes
197	.Mortise	558	..Electrical switch or transducer responsive to probe or probe is part of electrical circuit
199 R	.Screw thread	559	.Movable contact probe per se
199 B	...Bench type	560	..Plural probes
200	..Spectacle	561	..With electrical switch or transducer responsive to probe
201	..Tool	562	.Template
202	..Saw	563	..Single sheet type
203	..Wheel	564	...Alphabetical or numerical symbol type
203.1	..Watch	565	...Geometrical figure, three dimensional to two dimensional figure or curve
203.11	..Tread contour		
203.12	..With wheel supporting means		
203.13	...Roller or drum		
203.14	...Pivoted or sliding scuff board		
203.15	..Floor supported, wheel contacting		
203.16	..Plane and radius		
203.17	...Trammel		
203.18	..Axle, vehicle or wheel supported		
203.19	...Plane and radius		
203.2	...Trammel		
203.21	..Trammel		
502	.With calibration device or gauge for nuclear reactor element		
503	.Coordinate movable probe or machine		

129

BEST COPY AVAILABLE

GAUGE

.Template
..Single sheet type
566 ...Line or guide
567 .Surface plate or gauge block
568 .Work support adjustment
569 ..Rotary
570 ...Pin and slot type
571 .With scale
572 .Probe support
573 .Work support

DIGESTS

DIG 1 Magnetic
DIG 2 Air
DIG 3 Photoelectric
DIG 4 Interferometer
DIG 5 Differential transformer
DIG 6 Dial indicator shock absorber
DIG 7 Ribbon and wires
DIG 8 Eccentrics
DIG 9 Rectangular proportioner
DIG 10 Outlet box
DIG 11 Materials
DIG 12 Mechanical expedients
DIG 13 Wire and strain gauges
DIG 14 Spline and gear
DIG 15 Piston position indicator
DIG 16 Clips and rafters
DIG 17 Piston ring and bearing race gauging
DIG 18 Flush pin gauges
DIG 19 Thermal expansive
DIG 20 Tile
DIG 21 With laser

1284

JUNE 1985

- 0.5 R MISCELLANEOUS
- 0.5 A ..Hydrometallurgical techniques to treat or produce metal powder
- 0.5 AA ...Iron containing or magnetic materials of nickel or cobalt
- 0.5 AB ...Refractory metal containing
- 0.5 AC ...Cermets
- 0.5 B ..Pyrometallurgical techniques to treat or produce metal powder
- 0.5 BA ...Iron containing or magnetic materials of nickel or cobalt
- 0.5 BB ...Refractory metal containing
- 0.5 BC ...Cermets
- 0.5 C ..Atomizing
- 1 R BENEFICIATING ORES
- 1 T ..Titanium containing ore
- 2 ..Chemical treatment and flotation
- 3 ..Agglomerating
- 4 ..By coking
- 5 ..By sintering
- 6 ..Desulphurizing, dephosphorizing and dearsenizing
- 7 ..Roasting
- 8 ...Blast
- 9 ...Ores in suspension
- 10 R ELECTRO-THERMIC PROCESSES
- 10 A ..Alkali metal
- 10 C ..Consumable electrode
- 10 P ..Pressure
- 10 V ..Vacuum
- 11 ..Reduction, iron and iron alloys
- 12 ..Treating molten iron and iron alloys
- 13 ..Transfer processes
- 14 ..Zinc
- 20 R PYROMETALLURGY
- 20 F ..Foam
- 21 ..Reduction of complex ores
- 23 ..Pyritic smelting
- 24 ..Treating slags and oxidized drosses
- 25 ..Treating flue dust
- 26 ..Treating ores in suspension
- 27 ..Thermit-type reduction and treatment
- 28 ..Iron and steel
- 29 ..Reduction
- 30 ...Slag and special slag format
- 31 ...Fractional
- 32 ...To wrought iron
- 33 ...To solid iron without fusion
- 34 Gaseous reducing agent
- 35 Cyclic processes
- 36 Direct heating
- 37 Indirect heating
- 38 Followed by fusion
- 39 Melting and purifying solid iron
- 40 With fusion
- 41 Blast furnace reduction
- 42 Blast furnace fuel
- 43 ..Melting iron
- 44 R ...With briquetting
- 44 S Scrap
- 45 ..Treating molten iron or iron alloys
- 46 ..Transfer processes
- 47 ..Making wrought iron
- 48 ..Carburizing
- 49 ..Vacuum treatment
- 50 ..Heat and mechanical treatment
- 51.1 ...Adding solid and gaseous agents
- 51.2 Solid and a gas containing Oxygen
- 51.3 Solid contains Al(Aluminum)
- 51.4 Solid contains an alkali metal (e.g., Li(Lithium), Na(Sodium), K(Potassium), Cs(Cesium), etc.)
- 51.5 Solid contains a transition element (e.g., Ti(Titanium), V(Vanadium), Cr(Chromium), Mn(Manganese), Fe(Iron), Co(Cobalt), Ni(Nickel), Cu(Copper), Zn(Zinc), Zr(Zirconium), Nb(Niobium), Mo(Molybdenum), Pd(Palladium), Ce(Cerium), U(Uranium), etc.)
- 51.6 Solid contains an alkaline earth metal (e.g., Be(Beryllium), Mg(Magnesium), Ca(Calcium), Sr(Strontium), Ba(Barium), lime, limestone, etc.)
- 51.7 Adding solid and an inert gas, Ar(Argon), Nitrogen, He(Helium), or Carbon dioxide)
- 53 ...Solid treating agents
- 54 Basic and oxidizing
- 55 Basic
- 56 Oxidizing
- 57 Reducing
- 58 Scavengers
- 59.1 ...Gaseous treating agent
- 59.11 Impinges falling molten metal
- 59.12 Oxygen gas or air for oxygen content
- 59.13 Regulated by in-process variable(s)
- 59.14 Exhaust gas content
- 59.15 Temperature
- 59.16 In rotating converter
- 59.17 With treatment of exhaust gas
- 59.18 Oxygen or inert gas added to exhaust gas
- 59.19 Hydrocarbon present
- 59.2 Injected above and below melt surface
- 59.21 Including other gas above
- 59.22 Including other gas below
- 59.23 Injected only above melt surface
- 59.24 Including other gas above
- 59.25 Including other gas below
- 59.26 Injected only below melt surface
- 59.27 Including other gas above
- 59.28 Including other gas below
- 59.29 Carbon dioxide or water vapor
- 59.3 Rare/noble gas or inert gas
- 59.31 Nitrogen, hydrogen or halogen
- 61 ...Mechanical procedure
- 62 ..Nonferrous
- 63 ..Separating metallic constituents
- 64 ...Utilizing tin scrap
- 65 R ..Melting
- 65 EB ...Electron beam
- 65 ZM Zone melting
- 66 ..Alkali metals
- 67 R ..Alkaline earth metals and magnesium
- 67 A Refining magnesium and alkaline earth metals
- 68 R ..Aluminum
- 68 A Carbonaceous reducing agent
- 68 B Subhalide reduction
- 68 C Organic compound decomposition
- 69 ..Antimony
- 70 ..Bismuth
- 71 ..Cadmium
- 72 ..Copper
- 73 ..Smelting and bessemerizing
- 74 ...Smelting
- 75 ...Bessemerizing matte
- 76 ..Treating molten copper
- 77 ..Lead
- 78 ..Refining
- 79 Desilverizing
- 80 ...Manganese
- 81 ..Mercury
- 82 ..Nickel and cobalt
- 83 ..Noble metals
- 84 ...Rare and refractory metals
- 84.1 R ...Actinide and trans-actinide

PYROMETALLURGY		125	..Iron copper
..Nonferrous		126 R	..Iron chromium
..Rare and refractory metals		126 A	Carbon greater than 1.5 percent
...Actinide and trans-actinide		126 B	Manganese greater than 1.5 percent
84.1 A	Spent nuclear fuel purification and refining	126 C	Molybdenum, tungsten
84.4	...By reduction from halide	126 D	Titanium
84.5	From chloride	126 E	Vanadium
85	..Tin	126 F	Niobium, zirconium, tantalum
86	..Zinc	126 G	Beryllium, uranium, rare earth, yttrium, alkaline earth
87	...Direct heating	126 H	Cobalt
88	...Condensing and purifying	126 P	Boron
89	...Reducing and separating	126 J	Nitrogen, hydrogen, oxygen
90 R	..Reduction without fusing	126 K	Phosphorus greater than 0.06 percent
90 HP	...Hot press	126 L	Sulfur greater than 0.06 percent
91	..Reducing ores with gases	126 M	Selenium, tellurium
92	..Smelting processes	126 N	Arsenic, antimony, tin, zinc
93 R	..Treating molten metals	126 Q	Silicon greater than 1.5 percent
93 A	...Solid fluxing agents	128 R	Nickel
93 AB	For magnesium	128 A	Manganese greater than 1.5 percent
93 AC	For aluminum	128 B	Cobalt
93 AD	For copper	128 C	Silicon greater than 1.5 percent
93 DA	For lead	128 D	Carbon greater than 1.5 percent
93 E	...Gaseous agents	128 P	High phosphorus, sulfur, lead, selenium, tellurium
93 F	...Ore treatment fluxes	128 E	Alkaline earth, rare earth
93 G	...Packaged refining agents	128 F	Boron
95	..Reactive furnace linings	128 N	Nitrogen
96	..Protecting molten metal from oxidation	128 G	Niobium, tantalum
97 R	HYDROMETALLURGY	128 Z	Zirconium
97 A	..Isolating (washing) a free metal	128 T	Titanium
98	..Utilizing tin scrap	128 W	Molybdenum, tungsten
99	..Treating electrolytic and cementation slimes	128 V	Vanadium
100	..Treating gold and silver bullion	129	..Processes
101 R	..Chemical leaching	130 R	...Cast iron
101 BE	...Ion exchange	130 A	Magnesium addition agent
102	...With bromine	130 AB	Including calcium
103	...With ammonia or ammonium compounds	130 B	Methods of adding magnesium
104	...With ferric salts	130 BB	Fluidized injection
105	...With cyanide	130 C	Magnesium addition with other steps
106	...Precipitating	130.5	...Iron chromium
107	...Metallic precipitant	132	...Ferro-phosphorus
108	..Precipitating	133	...Reduction to metal
109	..Metallic precipitant		
110	..Combined sulphating and chloridizing		
111	..Chloridizing		
112	..Chlorine gas		
113	..Dry		
114	..Wet		
115	..Sulphating		
116	..Dry		
117	..Copper		
118 R	..Gold and silver	133.5	Iron
118 P	...From photography materials	228	CONSOLIDATED METAL POWDER COMPOSITIONS
119	..Nickel and cobalt	229	..Flake or fibrous constituent or fibrous grain structure
120	..Zinc and lead	230	..With nonmetal constituent (Si considered a metal), e.g., cermet, etc.
121	..Miscellaneous metals	231	..Molybdenum sulfide or functional constituent, e.g., lubricant, abrasive, etc.
122.1	ALLOYS OR METALLIC COMPOSITIONS	232	..Oxide containing
122.5	..Radioactive	233	...With another nonmetal
122.7	..Actinide	234	...Oxygen associated with more than one metal
123 R	..Ferrous	235	...Oxide of Al, Group IIA, IIIB, or IVB metal
123 CB	...Cast iron	236	..Carbide containing
123 AA	...Selenium, tellurium	237	...With another nonmetal
123 A	...Arsenic, antimony, tin	238	...Nonmetal is B or N
123 B	...Boron, nitrogen, hydrogen	239	...Carbide only of V, Nb(Cb), or Ta
123 C	...Beryllium	240	...Carbide only of Cr, Mo, or W
123 D	...High phosphorus	241	...Carbon associated with more than one metal
123 E	...Rare earth	242	...Free metal is Fe, Co, or Ni only
123 F	...Lead zinc	243	...Nonmetal is elemental carbon only
123 G	...High sulfur	244	..Containing B or N
123 H	...Uranium, zirconium		
123 N	...Manganese greater than one percent		
123 J	...Tungsten, tantalum, molybdenum, niobium, vanadium		
123 K	...Nickel, cobalt		
123 L	...Silicon		
123 M	...Titanium		
124	..Iron aluminum		

CLASS 420, NONFERROUS ALLOYS OR METALLIC COMPOSITIONS, FOLLOWS THIS SUBCLASS AND IS CONSIDERED INDENTED UNDER SUBCLASS 122.1 FOR PURPOSES OF HIERARCHY. SEE THE CLASS 420 DEFINITIONS FOR A DETAILED EXPLANATION OF THIS RELATIONSHIP.

JUNE 1985

- 245 CONSOLIDATED METAL POWDER COMPOSITIONS
.Base metal one or more transition
metals
- 246 ..Base metal one or more from Group VIII
or IB
- 247 ...Base metal one or more nobles metals
or Cu
- 248 ..Base metal confined to W
- 249 .Base metal one or more of Al, Be, Mg
- 250 ..Base metal is Be only
- 251 LOOSE METAL PARTICLES
- 252 .Mixed with particles of nonmetal
- 253 ..Halogen-containing particles
- 254 ..Boron-containing particles
- 255 .Particles of different metals
- 256 CONSOLIDATED FURNACE CHARGES (E.G.,
BRIQUETTES) CONTAINING FREE METAL
- 257 FLUX COMPOSITION
- CROSS-REFERENCE ART COLLECTIONS
- 950 CONSOLIDATED METAL POWDER COMPOSITIONS
OF >95% THEORETICAL DENSITY, E.G.
WROUGHT
- 951 .Oxide containing, e.g., dispersion
strengthened
- DIGESTS
- DIG 1 Fiber utilization in powder metallurgy
processes
- DIG 2 Pyrometallurgy - rutledge
- DIG 3 Hydrometallurgy

JUNE 1985

2	COMBINED WRENCHES AND PUMPS OR OILERS	46	WOODEN FLOORING TOOL
3.05	SHELL, PROJECTILE, OR WAD EXTRACTORS	300	TOOL JAW(S) POSITIONED BY RELATIVELY
3.07	RECEPTACLE CLOSURE REMOVER		MOVABLE PLURAL HANDLES (E.G., PLIERS)
3.08	..Having discrete retainer or receptacle	301	..Including hydraulic features
	for removed closure	302	..Antipodal jaw surfaces move apart as
3.09	..Combined or plural		handles approach (e.g., outwardly
3.15	..Attached to receptacle or closure		expanding jaws)
3.2	..Power-, vacuum-, or fluid	303	..With three or more jaws
	pressure-operated	304	..With single pair of handles
3.25	..Wall or surface mounted or supported	305	..Double pair Janus-jawed
3.31	..With receptacle supporting or grasping	306	With jaws fixed to handle(s)
	means	307	With intermediate jaw(s) in line with
3.32	...With bottom support		and between outer jaws
3.33	..Rotary remover device, gear or lever	308	With three jaws only
	actuated	309	Two pivoted jaws and one sliding jaw
3.27	..Lever or prying type	310	Three coacting pivoted jaws
3.35	..Movable into or over handle	311	With separate jaw pairs
3.36	..With additional receptacle-engaging	312	Parallel jaws perpendicularly spaced
	means	313	..With means requiring a completion of
3.37	..Lever- or gear-translated closure		travel of jaw movement
	remover	314	..With means for step-by-step jaw
3.29	..For engaging receptacle about closure		movement
	(e.g., socket type)	315	..With means to immobilize handles
3.39	..Bottom support		against relative angular movement and
3.4	..Gripping type		means to move jaw(s) thereafter
3.41	..Finger grapple type	316	..With plural selective handle positions
3.42	..With reciprocating closure-engaging	317	..With means for relative longitudinal
3.43	..With deformable strip-tightening means		handle movement
3.44	..With pivoted closure-engaging parts	318	..With means to immobilize jaws
3.45	..Screw type	319	..With lock-release means
3.55	..Levering or prying type	320	..With lock-disabling means
3.47	..With impaling or inserting remover	321	..Including spring-urged handles or jaws
3.56	..Having discrete relatively movable	322	...And spring-urged latch
	portions	323	...Spring-urged latch element(s)
3.57	..Having handle, intermediate hook, and	324	..Positive lock means
	end fulcrum	325	...With plural selective jaw positions
3.48	..Impaling or inserting type	326	Threaded lock means
3.49	..With lateral projection or abutment	327	With threaded jaw adjustment means
3.5	SPECTACLE	328	Interdigitated lock means
3.6	..Plier	329	..With means (nontoggle) to hold jaws
3.7	LEAF-SPRING SPREADERS		against only retrograde movement
3.8	FUSE PULLERS	330	..With plural preselective jaw positions
4	ENGRAVERS' CLAMPS	331	..Manipulated lock member
6	WATCHMAKERS'	332	..Pivoted bail
7	..Jewel setters'	333	...Sliding yoke
7.5	..Mainspring winders	334	...Threaded member
8	..Ruby pin setters	335	Nut
8.1	PACKING	336	...Pivoted rack
9.2	STYLUS	337	...Pivoted pawl
9.21	STAMP SCARIFIER	338	..Rack and pawl means
9.22	PERFORATOR AND INKER	339	..Coacting friction means
9.24	TAPPET ADJUSTER	340	...Serrated surfaces
9.26	PLOWSHARE HOLDER	341	..With means to vary range limit(s) of
9.3	HOSE-CLAMP APPLIERS		jaw movement
9.4	WIRE STRIPPER	342	..Jaw-actuating means
9.51	..Bench tools		(handle-manipulation conversion)
9.41	..Having relatively movable clamp and	343	..With means to choose one of a
	blade		plurality of actuator leverages
9.42	..Clamp and blade move relative to	344	...Predetermined and discrete member of
	supporting structure		leverage selections
9.43	..Blade moves relative to handle to	345	..Axial motion of handle-attached
	remove insulation		actuators(s)
9.44	..Pivoted blade	346	..Pivotal motion about axis of parallel
10	NUT LOCK		actuator rod(s)
13	BOLT HOLDERS	347	..With means to articulate and/or slide
15.2	REPAIR TOOLS FOR RESILIENT TIRES		both jaws
15.3	..Holders for spread tire casings	348	...With means for arcuate motion of both
15.4	..Deflating tools		jaws
15.5	..Combined cement injectors and plug or	349	Cam actuator
	patch inserters	350	Dual pivoted actuator levers
15.6	..Cement injectors	351	With jaws pivoted together
15.7	..Plug or patch inserters	352	...With means for parallel movement of
15.8	SKID CHAIN APPLYING TOOLS		work-engaging surfaces
15.9	FOR LOCK OR LATCH	353	Longitudinal guide means
16	CHUCK KEY	354	Lateral guide means
44	HOLDER, PUSHER, OR SETTER FOR	355	..With means for sliding jaw actuation
	DRIVEN-TYPE FASTENERS	356	...With adjustment means
45	SHINGLE TOOL	357	Pivoted pawl type

TOOL JAW(S) POSITIONED BY RELATIVELY		407	..By relative sliding or slipping of handles
MOVABLE PLURAL HANDLES (E.G., PLIERS)			
	..Jaw-actuating means	408	...With fulcrum-carrying member
	(handle-manipulation conversion)	409	With positive lock for member
	..With means for sliding jaw actuation	409.5	With spring urged lock for member
358	...Pinion and rack	411	...With pivot pin fulcrum in notched slot
359	...Claw lever and rack or notch	412	With flattened cross section pin
360	Plural teeth on claw	413	...With toothed-member fulcrum on notched handle
361	...Grip lever and cam	414	...With opposed interdigitated concentric segmental annular portions
362	...Grip lever and link		
363	Toggle link		
364	..Including claw lever and rack or notch means	415	..Crossed handles
365	...With adjustment means	416	..Joint detail
366	...Plural teeth on claw	417	..Resiliently urged
367	..Including toggle means	418	..Jaw features
368	...With toggle release	419	..Tined or digitated jaws
369	By means acting on intermediate pivot	420	..Jaws extend laterally beyond side edge plane of handle(s)
370	Release means carried by grip lever	421	..Jaw attachment and/or inserts
371	Mounted on intermediate pivot	422	...Selective
372	...With means to limit movement of intermediate pivot	423	By detachment
373	...With means for relative parallel movement of jaws	424	...Articulated
374	...With pitman between grip lever and intermediate pivot	424.5	..Nonplanar jaw face
375	...With toggle linkage and actuated jaw mounted on carrier	426	..And diversely shaped face
376	...With connecting rod between grip lever and actuated jaw	426.5	...Work conforming face
377	...With connecting rod between grip lever and handle member	427	..Resiliently urged
378	With actuated jaw pivoted on handle member	427.5	..Handle
379	With means for resiliently biasing jaw and/or toggle	463	INCLUDING TOOL DRIVING BY IMPACT
380	Extension coil spring between jaw and handle member		DELIVERING COMPONENT OR COOPERATING ANVIL
381	..Including grip lever actuator and pivoted jaw (e.g., tandem levers)	464	..Motor or gear driven
382	...With adjustment means	465	..Structurally constrained to arcuate movement
383	...With link connecting jaw and grip lever	466	..About turning axis of work engaging portion
383.5	..Including cam actuator and pivoted jaw	52	WRENCH, SCREWDRIVER, OR DRIVER THEREFOR
384	..With adjustment means	53.1	..With elongated hot line stick
385	..Adjustable relationship between jaw(s) and/or handle(s)	53.11	..Globe manipulator
386	..By relative positioning of jaw(s) only	53.12	...Rotatable grasper
387	...Both jaws adjustable	53.2	..Stud-removal and emplacement
388	...By threaded elements	429	..Responsive to movement of work
389	Rotatable screw type	467	..Responsive to torque on work
390	Rotatable nut type	468	..With marking mechanism
391	...Maintained by detent and rack	469	..Means for regulating motor
392	...Maintained by locked interdigitated members	470	...Fluid motor
393	..By angular orientation of one handle portion relative to other	471	..Permanently deformable component
394	..By selection of pivot hole(s) in each handle	472	..Relatively movable work contacting components
395	..By threaded adjustment means	473	..Rotatable, coaxial, clutching components
396	...Worm and rack type	474	...Having intermediate, disparate, interlock element
397	...Peripherally threaded handle manipulated for travel relative to other handle	475	...Having complementary formations
398	...Threaded element travels relative to both handles	476	...Having friction type contact surfaces
399	...Rotatable screw in nut	477	..Work engaging portion attached to and turned by resilient member
400	Screw attached to joint	478	..Work engaging portion pivotally or rotatably connected to handle
401	...Nut attached to joint	479	...With electric signal device
402	...Rotatable nut on screw	480	...Axis of connection coaxial to rotational axis of work
403	Screw attached to joint	481	With arm extending from portion
404	Nut attached to joint	482	With pivoted locking pawl
405	..By manipulation of pivot-carrying member	483	...With arm extending from portion and through connection
406	...With angular orientation of eccentric pivots joining handles	54	..Machine
		55	..Bolt-holding
		56	...Gear-operated
		57	...Gear-operated
		57.11	...With motor
		57.12	Oblique angle drive
		57.13	Right angle drive
		57.14	Parallel axis drive
		57.15	Round work
		57.16	With additional work-engaging means
		57.17	Flexible jaw

JUNE 1985

WRENCH, SCREWDRIVER, OR DRIVER THEREFOR	443	...Having camming or wedging element for moving components
..Machine	444	Axially shiftable element located between and wedging against components
..Gear-operated	445	With threaded surface for cooperating with mating tool structure
...Round work	446	Rotatable element located between and camming against components
57.18 ...Cam-operated jaw	447	...Having cooperating threaded element type actuating means
57.19 Fluid-operated jaw	448	...Having resilient or spring biased component
57.2 Pivoted jaw	449	Biased component rotated about axis collinear to rotational axis of tool
57.21 Sliding jaw	450	..Inserted portion mounted to pivot or swivel relative to longitudinal axis of handle
57.22 ...Multiple drive or driven means	451	..With separate means for guiding or gripping work
57.23 With magazine	452	...Having resilient, relatively movable, work gripping members
57.24 ...With support	453	With camming or wedging element for moving members
57.25 Vehicular	454	...Having pivoted, relatively movable, work gripping members
57.26 ...Adjustable angle drive	455	With camming or wedging element for moving members
57.27 Flexible shaft	456	...Having member with work underlying portion
57.28 ...Oblique angle drive	457	Member spring biased for axial movement
57.29 ...Right angle drive	458	Resilient member
57.3 ...Parallel axis drive	459	..Inserted portion having threaded periphery
57.31 ...Common axis drive	460	..Inserted portion having plural, noncollinear blades (e.g., Phillips)
57.32 ..Double or duplex	461	..Inserted portion having plural, separate, work engaging projections
57.33 ..Round work	64	..Flexible
57.34 ...With additional work-engaging means	65	..Threaded adjustment
57.35 ...With support	65.2	..Link
57.36 ..Multiple work-engaging means	68	...Handle jaw
57.37 ..With feed or magazine means	69	Pivoted
430 ...Utilizing fluid to convey work	70	Duplex
431 ...Including chute having longitudinal axis collinear with rotational axis of work turning portion	65.4	...Toothed adjustment
432 ...Including vibratory work supporting member	73	..U-crank arm
433 ...Including revolvably driven work contacting member	77	..Double-ended, simultaneous adjustment
434 ...Including driven, flexible, work supporting strip	90.1	..Plural pivoted jaws and handle-lever
435 ...Including driven, reciprocating, conveying member	90.2	..Cam or gear operated
57.38 ..With tensioning means	90.3	..Jaws enclose work
57.39 ..Step by step	90.4	...Including latch to connect jaw to handle-lever
57.4 ...With support	90.5	At least three jaws enclose work
57.41 ...Vehicular	90.6	...Including latch to connect pivoted jaws
57.42 ..Direct drive	90.7	At least three jaws enclose work
57.43 ...Flexible	90.8	Two jaw pairs connected by latch
57.44 ...Fluid	90.9	..Including means to adjust or to secure jaw in adjusted position
57.45 ...Oblique angle	91.1	..Slidable pivot
57.46 ...Tangential engagement	91.2	..First jaw pivoted directly to handle and to second jaw
57.5 ..Turret head	91.3	..Two jaws pivoted directly to intermediate member
74 ..Wheel or endless track operated	92	..Pivoted inner jaw
75 ..Hub-rim grasp	93	..Nut or screw fulcrum
76 ...Internal	94	..Pin fulcrum
58 ..Handle clutched to head	95	...Roller jaw
58.1 ..With additional head-turning means	96	Pinion
58.2 ..Radially slotted or open end head	97	...Spring-pressed
58.3 ..Axially movable clutching parts	98	..Pivoted outer jaw
58.4 ..Positive two-way drive (e.g., dog clutch)	99	..Fixed fulcrum
58.5 ..Radially extending eccentrically movable handle	100	...Nontraveling jaw
59.1 ..Ball or roller wedge		...Spring-pressed
60 ..One-way detent drive, e.g., ratchet		...Traveling jaw
61 ...Pivoted pawl		
62 Reversing		
63 Single		
63.1 ...Reversing		
63.2 Single pawl		
436 ..Having work engaging and force exerting portion inserted into cavity (e.g., allen wrench, screwdriver)		
437 ..Combined with or usable as diverse type wrench		
438 ..Having structure adapting portion or tool for separation		
439 ...Including discrete, separately usable inserted portions		
440 ...Pivotally or rotatably mounted		
441 ...Inserted portion cuts into or deforms cavity		
442 ...Inserted portion having relatively movable components		

134

BEST COPY AVAILABLE

JUNE 1985

WRENCH, SCREWDRIVER, OR DRIVER THEREFOR		176.2	...And means to engage peripheral face of work
101	..Pivoted outer jaw	176.3	..Having relatively movable jaws
102	...Fixed fulcrum	119	..Rigid jaws
103	...Traveling jaw	120	..Round work
104	Nut fulcrum	121.1	..Enclosed (e.g., socket)
105	Rocking sleeve	122	...Watch and clock keys
106	Spring-pressed	123	Dust protectors
107	Fulcrum washer	124.1	...With nut ejectors
108	Sleeve-enclosed nut	125	...Work-holding
109	...Traveling fulcrum	124.2	...Slotted socket
110	...Threaded handlebar	124.3	...Through socket and perpendicular handle
111	...Axillary rotating	124.4	...Plural sockets
112	...Slotted guide	124.5	Slidably or pivotally connected to handle or each other
113	...Fulcrum tooth and rack	124.6	...Having axial opening for removable handle
114	..Pivoted side jaw	124.7	...Having perpendicular handle
115	..Bevel-closing	125.1	..Double-ended
116	...Cammed into socket by axial nut or screw	177.1	..Handle or shank
117	Sleeve socket nut	177.8	..Angularly adjustable handle
118	Rotating ring	177.9	...With yieldable one-way detent
119	Wedge	177.2	..Extensible handle or handle extension
120	Rocking link	177.3	..Having finger opening
121	..Transverse screw clamp	177.4	..Having means to store parts
122	..Sliding jaw, handle-lever grip	177.5	..Having terminal cross arm
123	..Claw	177.6	..Foldable or flexible
124	..Sliding jaw, cam-closing	177.7	..Having pivoted handle section
125	..Slidable jaw adjustments	177.75	..Universal joint
126	..Rack	177.85	..Including socket and boss type connecting means
127	...Interlocking jaw handles	178	..Reversible jaws
128	...Locking set screw or nut	179	..Sliding jaw face
129	...Pinion lock	462	..Having stationary structure for supporting wrench or screwdriver
130	...Pivoted rack catch	180.1	..Attachment, or including adjunct or replaceable portion
131	...Nontraveling	181	..Cutters
132	Intermediate fulcrum	182	..Rotary
133	Transverse	183	..Roller clutch
134	Cam-seated	184	..Shank-embracing
135	Indirectly operated	185	..Socket reducers
136	Intermediate fulcrum	185.1	..Removable jaw face
137	...Shank-engaged cam	185.2	..Movably mounted
138	...Sliding rack catch	186	..Jaw faces
139	...Cam-seated	19	DEFORMABLE HEAD MALLET
140	...Screw- or nut-seated	20	HAMMER
141	...Spring-seated	21	..Having work protector surrounding face
142	...Spring-seated jaw frame	22	..Having shock absorbing means
143	...Integral frame and teeth	23	..Having nail placer
144	...Wedge lock	24	..Magnetic
145	...Wedge pusher	25	..Having replaceable striking face
146	..Shank grip	26	..Having plural striking faces
147	...Side jaw	27	..Rod encircling type
148	...Clutch yoke	28	BIT STOCK HAVING MANUAL DRIVE MEANS (E.G., BRACE)
149	...Roller clutch	29	..Having ratchet mechanism
150	...Locking incline	30	..Straight crank arm
151	...Thread	31	..Adjustable pawl
152	...Displaceable half nut	32	..Pivoted pawl
153	...Displaceable nut or screw	33	..Sliding pawl
154	...Traveling screw, shank rack	34	..Straight stock having side driving gear
155	...Interrupted	35	..Having U-shaped crank arm
156	Nut set	36	..Speeding gear
157	Traveling nut	37	..Bit shaft inclined relative to crank
158	Traveling screw, shank rack	484	FOR ADJUSTING VARIABLE POSITIONED PARTS
159	Right and left threads	485	SPREADER
160	Rotatable threaded handle shank	486	RESILIENT ARTICLE TENSIONER OR COMPRESSOR
161	...Sliding side jaw	489	HANDLE FOR TOOL
162	...Nontraveling rotatable nut	490	..Having storage compartment
163	Intermediate	491	..Having discrete relatively movable tool clamp
164	Causing outer jaw to slide	492	..Having cap or reinforcing means
165	Terminal	487	HAND HELD HOLDER OR HAVING CLAMP
166	Causing outer jaw to slide	488	MISCELLANEOUS
167	...Traveling rotatable screw		
168	...Bracket-bearing		
169	...Spiral groove engaged by slidable actuator		
170	...Traveling and rotating nut		
171	...Threaded handlebar		
172	...Traveling and rotating screw		
173	...Shank rack		
174	..Spanner		
175	176.15		
176	..Having means to engage work axially		

JUNE 1985

CROSS-REFERENCE ART COLLECTIONS

- 900 WRENCH OR SCREWDRIVER CONSTRUCTED FROM
SPECIFIC MATERIAL
- 901 WRENCH OR SCREWDRIVER ADAPTED TO TURN
EYE SCREW

DIGESTS

- DIG 1 Tool-support adjuncts
- DIG 2 Spiral drive for wrenches
- DIG 3 Wrenches, thread-adjustment lock
- DIG 4 Double adjustments, sliding jaw
- DIG 5 Wrench scales and indicia
- DIG 6 Spring means biasing wrench jaws
- DIG 7 Bicycle spoke or nipple wrench
- DIG 8 Crowfoot-type wrenches
- DIG 9 Pivoted jaw latch means
- DIG 10 Iris-type wrench head
- DIG 11 Adapters for different-sized fasteners
- DIG 12 Power hammer

136

JUNE 1985

1.12	GUN HEATERS	136	..Triggers and/or remote control
1.13	MINE-DESTROYING DEVICES	137	..Interlocks between firing and cartridge feeding
1.15	WELL PERFORATORS	138	...Locks bolt open
1.16	ENGINE STARTERS	139	..Semi-automatic (e.g., double sear)
1.2	SMOKE OR RESIDUE EJECTOR	140	...Convertible to full automatic
1.25	LUBRICANT INJECTOR	141	...Breech block, barrel or hammer disconnected
1.34	LINE THROWING	142	With selective safety device
1.35	TRENCH MORTARS	143	...Alternate control of hammer and breech block or barrel
1.3	MUZZLE LOADING	144	...With means for disconnecting trigger and sear
1.42	GUN HANDLES	145	By breech block or barrel motion
1.51	BOMB, FLARE AND SIGNAL DROPPING	146	...Hammer disconnected
1.52	.Drop grenade	147	...Hammer cocked and released by trigger
1.53	.Sway braces	148	..With selective safety device
1.54	.Bomb displaced from exterior of plane	149	..With automatic sear or sear release
1.55	.Arming device	150	..With automatic sear or trigger safety
1.56	.Electrical and radio releases and sighting	151	..With automatic hammer
1.57	.Explosive releases	152	...Operates breech lock
1.58	.Shackles	153	..Operates breech lock
1.59	.Racks	154	..With automatic hammer cocking and/or safety means
1.6	.Timing devices	155	.Movable chamber type (e.g., revolver)
1.61	.Sighting	156	..Operating as gas piston and/or recoil member
1.7	RECOILLESS GUN	157	..Recoiling barrel with revolving chambers
1.701	.Having a reaction mass	158	.Movable butt piece
1.702	..Barrel parts separable for loading	159	.Combined movable barrel and gas operated
1.703	.Having pressure-control means	160	.Movable barrel (e.g., rotary)
1.704	.Having breech closure	161	..Forwardly movable
1.705	..Closure has firing device	162	..Rearwardly movable
1.706	..Cartridge-case closure	163	...Barrel having motion in addition to axial, rectilinear
1.8	ROCKET LAUNCHING	164	...With breech lock latch
1.801	.Having rocket-storage and transfer means	165	...Long recoil
1.802	..Launcher movable relative to storage means	166	...Nonrectilinear breech block motion
1.803	..Having magazine-gate means to feed and support rocket for launching	167	...Nonaxial rectilinear breech block motion
1.804	..Storage means movable to facilitate launching	168	Pivoted locking member or toggle lock
1.805	.Having means to transfer rocket to launcher	169	...With accelerator and/or unlocking lever for breech mechanism
1.806	.Having means restraining rocket from movement in launching direction	170	...With barrel latch
1.807	..Including rocket-firing means	171	...Nonrectilinear breech block motion (e.g., tilting rotary)
1.808	..Rocket spin stabilized while restrained	172	Rotary and sliding
1.809	.Underwater launching	173	...Sliding locking member
1.81	..Rocket launched from container	174	...Rotary locking member
1.811	.Having umbilical-separating means	175	...Toggle locking member
1.812	.Having safety devices for preventing premature ignition or launching	176	...Pivoted locking member
1.813	.Having rocket-firing means	177	..Barrel buffers and brakes
1.814	..Rocket propellant ignited by electrical means	178	..Barrel return means
1.815	.Movable launcher	179	.Gas piston-type lock actuator carried by breech block (e.g., firing pin)
1.816	.Having tubular guide means	180	.Breech block lock (positive or impositive)
1.817	..Including a forward closure	181	..With latch
1.818	..Including an auxiliary rocket-launching charge	182	..Inertia member released lock
1.819	.Having guide means	183	...Blow back initiated
5	SUBMARINE	184	..Nonrectilinear breech block motion (e.g., tilting rotary)
125	AUTOMATIC	185	...Rotary and sliding
126	.Plural gun, barrel or bore	186	..Nonaxial, rectilinear, breech block motion
127	..Firing control	187.01	..Sliding locking member
128	.Convertible gun operation (e.g., to nonautomatic)	187.02	...Cylindrical or ball bearing
129.01	.Regulation of speed or rate of automatic fire	188	..Rotary locking member
129.02	..By regulating burst	189	..Toggle locking member
130	..By regulating time of return of breech block	190	..Pivoted locking member
131	..By regulating time of release of hammer	191.01	.Gas piston type
132	.Firing device operation or control (e.g., full automatic)	191.02	..Annular piston
133	..Synchronizers	192	..Gas piston compresses breech opening spring
134	..Disabled at predetermined angles of fire	193	..Gas ports and/or regulators
135	..Electrical		

	AUTOMATIC	36.08	..Self-propelled, e.g., tanks
194	.Blow back breech block	36.09	..Wheeled
195	..Pistol grip magazine	36.11	.For aircraft
196	...Breech slide type	36.12	.For ships
197	..Box magazine	36.13	.Turret type
198	.Buffers and brakes	36.14	..With vision slit or gun port closures
199	.Receiver closures and/or breech block return means	36.15	.On elevatable platform
4.05	EXPLOSION OPENED BREECH	36.16	.Anti-aircraft type
4.1	.Rotary breech block	36.17	.With explosive device
4.2	.Transverse sliding breech block	37.01	MOUNTS
4.5	.Blow back breech block	37.02	.Anti-aircraft
6	FUSE SETTERS	37.03	.Light machine gun type
6.5	.Combined with projecting, launching or releasing devices	37.04	.Rifle and pistol mounts
	PNEUMATIC	37.05	.Mortars
7	.Explosive charge	37.06	.Submarine
8	ACCELERATING	37.07	.Trunnion
9	MACHINE GUNS	37.08	.Counterbalances
11	.Axially moving breech block	37.09	.Leveling
12	.Revolving barrels	37.11	.Locks
13.05	.Revolving cylinders	37.12	.Spherical or oval bearing gun support
13.1	..Nonparallel bores	37.13	.Bases
1.41	MULTIPLE BARREL GUNS	37.14	.Reciprocating mounts
14.05	BARRELS	37.15	.With body protecting devices
14.1	.With heat exchanger	37.16	.Aircraft type
14.2	.Flash shield	37.17	..Power operated
14.3	.Recoil absorbers and climb arrestors	37.18	..On engine
14.4	.Silencers	37.19	..On aircraft wing
14.5	.Recoil increasers	37.21	..Retractable gun turret
14.6	.Sabot strippers	37.22	..Multiple guns on mount
15	.Wound	38	.Disappearing gun
16	.Composite	39	..Counterpoise
17	BREECH CLOSURES	40.01	.For field use
18	.Key locked	40.02	..Wheeled mortars
19	.Screw	40.03	..On armored car
20.2	..Interrupted	40.04	..Nonshielded motor driven guns
20.4	...Motor operated	40.05	..On sleds
21	...Fixed ammunition	40.06	..On tripods (i.e., for light guns)
22	.Transverse	40.07	..Libers and caissons
23	..Sliding and swinging	40.08	..With hitches and couplings
24	..Sliding	40.09	..With training spades
25	..Swinging	40.11	..Carriage suspended for firing
26	.Gas checks	40.12	..Traveling locks
27.11	FIRING	40.13	..By separate transport carriage
27.12	.Safety	40.14	..Components are separable for transport
27.13	.Primer fired	40.15	..Trail carriages and links
27.14	.Percussion firing	40.16	..Railroad type
27.3	.Gun firing actuators	41.01	.Training mechanisms
28.05	.Electric	41.02	..Motor operated
28.1	..Electrical and mechanical	41.03	...Predetermining parameters for automatic firing
28.2	..Training and firing	41.04	...Eliminates lag or overrun
29	PRACTICE BARRELS	41.05	...By television monitoring
30	VENTS AND STOPPERS	41.06	...By light reception
31	TOMPIONS AND VALVES	41.07	...By radar
33.01	CARTRIDGE FEEDING	41.08	...By sound
33.02	.Drum magazine	41.09	...Gyroscopically or pendulum controlled
33.03	.Movable chamber	41.11	...Compensates for trunnion tilt
33.04	.Selective feed	41.12	...By hydraulic means
33.05	.With rammer separated breech block	41.13	...For scattering effect
33.1	.With magazine	41.14	...For naval gun fire control
33.14	..Belt feed	41.15	...With unitary control for plural motors
33.16	...With rotary feeder	41.16	..For relatively movable gun barrels
33.17	..With rotary feeder	41.17	..Aiming device mounted on gun
33.2	.Belt feed	41.18	..For limiting the field of fire
33.25	..With rotary feeder	41.19	..Sights or line devices
33.4	.Empty shell receivers	41.21	...On aircraft
33.5	.Cartridge feeding auxiliary feeder	41.22	...For anti-aircraft
34	.Holders	42.01	.With recoil check
35.01	.Belts	42.02	..On trail spade
35.02	..Disintegrating type	42.03	..Fire-out-of-battery type
36.01	SHIELDS	43.01	..Fluid
36.02	.Shape or composition	43.02	...With function of elevation
36.03	.Rotating shield	44.01	..Spring type
36.04	.For fixed structure	44.02	...Elastic type
36.05	.Body	45	LOADING
36.06	.Small arms attached	46	.Hoisting apparatus
36.07	.Transportable	47	.Rammers

CLASS 89 ORDNANCE

89-3

JUNE 1985

1.11 WAGING WAR
1.14 EXPLOSIVE OPERATED APPARATUS
1.4 CHARGING MECHANISMS FOR GUNS
1.1 MISCELLANEOUS

JUNE 1985

1	MISCELLANEOUS	38.8	Including parallel louver vanes
1.5	PRESSURE MAINTENANCE (E.G., AIRCRAFT)	38.9	...With air pump
2	AUTOMOBILE	39.1	..With air pump
2.01	..Condition responsive control	40.01	..With air distributor
2.02	..Parked, e.g., for drive-in theater	40.02	...Having airway joint with ball or cylinder rotatable in a socket
2.03	..Seat	40.03	...Baseboard type
2.04	..Side or rear window defroster	40.04	Having portion or element movable during normal use
2.05	..Heating	40.05	...Ceiling type diffuser
2.06	..Outside air intake to heat exchange core	40.06	Having emergency smoke or fire responsive valve
2.07	...Cowl intake	40.07	With light fixture
2.08	..Heating and defrosting system	40.08	Air passes over lamp
2.09	..Defroster	40.09	Having adjustable valve
2.1	...Windshield exterior	40.1	Having perforated or porous element
2.11	..Air treatment, e.g., cooling, filtering	40.11	Having portion or element movable during normal use
2.12	..Open window ventilator, e.g., deflector	40.12	Having plural vanes
2.13	..At upper edge or sliding window	40.13	Concentric
2.14	..Ventilating structure in roof	40.14	Having elongated output slot
2.15	..Duct extends lengthwise of roof	40.15	Single, annular output slot
2.16	..Cowl ventilator	40.16	Having portion or element movable during normal use
2.17	..Having moisture deflector or drain	40.17	Pivoted
2.18	..Closed vehicle exhaust	40.18	Air nozzle
2.19	..Windshield ventilator	40.19	...Having air duct extending into room
3	LOCOMOTIVE CAB	40.2	...Having louver
4	CAR	40.21	With concentric vanes
5	..Sleeping	40.22	Having separate, adjustable internal damper
6	..Freight	40.23	Adjustable vane
7	..Ice-bunker closure	40.24	Movable louver
8	..Inlet and outlet	40.25	Temperature responsive
9	..Injector and ejector	40.26	Aligned multiple movable sets of vanes
10	..Air pump	40.27	Serially arranged sets
11	...Axle operated	40.28	Repositionable set
12	..Liquid contact	40.29	Rotating disks
13	..Inlet	40.3	Continuously oscillating
14	..Air pump	41.1	..With adjustable valve
15	...Wind-operated motor	41.2	...Axially movable
16	...Axle operated	41.3	...Sliding
17	..Liquid contact	42.01	..Having outlet airway
18	..Deflecting separator	42.02	..With air pump
19	..Outlet	42.03	...And having specific emergency smoke handling structure
20	..Ejector	42.04	...Having specific air pump actuator
21	...Air pump	42.05	...Pump induces draft in exit duct
22	...Wind-operated motor	42.06	...Having plural suction intakes
23	...Axle operated	42.07	...Ceiling or wall mounted
24	..Agitating fan	42.08	...Having vibration absorbing or preventing structure
25	..Wind-operated motor	42.09	Having readily movable air regulating louver, damper, or cover
26	..Axle operated	42.1	Upstream of air pump
27	..Dust guards	42.11	...With movable access cover
28	..Inside of window	42.12	...With readily movable air regulating louver, damper, or cover
29	..Outside of window	42.13	...Having exterior neck with enlarged, weather resistant cover
30	LOCOMOTIVE-CAB DUST GUARDS	42.14	..For skylight
31	BUILDING	42.15	..Having emergency smoke handling feature
31.5	..Liquid contact	42.16	..Having readily movable air regulating louver, damper, or cover
31.6	..Hollow wall	42.17	...Internal damper
32	..Forced recirculation of building air alone	42.18	Continuously horizontal damper panel
33	..For use with heating or cooling means	42.19	Pivoted damper panel
34	..Having both inlet and outlet airways	42.2	...Along roof ridge
35	...With air pump	42.21	...Along roof ridge
36	...Wind-operated motor	42.22	..Slant roof ventilator
37	...Air partially recirculated within building	42.23	..Having exterior neck with enlarged, weather resistant cover
38	...For use with heating or cooling means	44	..Window wind deflectors
39	...Cowl	45	..Flue heaters
40	..Protecting air current	46	..Chimney
41	..Having inlet airway		
42	..Including structure for mixing plural air streams together		
43	...And having specific noise inhibiting structure		
44	...With shaped nozzle		
45	And readily movable air regulating louver, damper, or cover		
46	...With readily movable air regulating louver, damper, or cover		
47	Pivoted		
48	Plural		

- BUILDING
- 47 .Flue heaters
 - 48 ..Gas jet or lamp
 - 49 .Air entering furnace or chimney
 - 50 RAILWAY TUNNELS AND SUBWAYS
 - 51 MINES
 - 52 PROVISION SAFES
 - 53 STORAGE
 - 54 .Grain ships
 - 55 .Buildings
 - 56 .Grain bins
 - 57 .Perforated conduits
 - 58 ..Inserters
 - 59 CHIMNEYS
 - 60 .Valved cap
 - 61 .Metal
 - 62 COWLS
 - 63 .Inlet and outlet
 - 64 ..Wind vane
 - 65 .Inlet
 - 66 .Wind vane
 - 66.1 .Outlet
 - 67 ..Brick chimney cap
 - 68 ..Wind vane
 - 69 ...Rotary air pump
 - 70 Rotary wind motor
 - 71 ...Ejector
 - 72 ..Wind shield
 - 73 .Rotary wind motor
 - 74 ..Tilting top, wind operated
 - 75 ..Swinging valves, wind operated
 - 76 ..Rotary vane-wheel
 - 77 ..T-top
 - 78 ...Swinging valves, wind operated
 - 79 ..Ejector
 - 80 ...Back-draft preventer
 - 81 ..Spiral
 - 82 ..Spaced ring
 - 83 ..Four-side outlets with shield
 - 84 ..Spaced cap
 - 85 ...Spaced band
 - 86 ...Positively actuated valve
 - 86.5 Fusible release
 - 87 ..Having cross section with multiple sides
 - 88 DOOR
 - 88.1 WINDOW
 - 89 .Bed or couch
 - 90 .Condensation preventers
 - 91 ..Locomotive cab
 - 92 ..Car
 - 93 .Car
 - 94.1 .Air pump
 - 94.2 ..Cooling air conditioner
 - 95 .Automatic air valve
 - 96 .Pane
 - 97 .Sash
 - 98 .Top
 - 99.01 .Bottom
 - 99.1 ..Downward deflecting wall
 - 99.2 ..Upward deflecting wall
 - 99.3 ...Swingable or adjustable angle
 - 99.4 With adjustable size or flexible side walls
 - 99.5 ...Slidably interconnected sections
 - 99.6 ..Casing
 - 99.7 ..Slidably interconnected sections
 - 99.8 ..Shutter, register or grille type
 - 100 .Liquid contact
 - 100.5 .Louver type
 - 101 REGISTERS
 - 102 .Floor
 - 103 ..Single pivoted valve
 - 104 ..Air distributor
 - 105 ...With air return vent
 - 106 ..Air moistener
 - 107 .Wall
 - 108 ..Inward pivoted valve
 - 109 ..Pivoted slats
 - 110 ..Air distributor
 - 111 ..Air moisteners
 - 112 .Pivoted slats
 - 113 ..Radial
 - 114 ..Flush surface
 - 115 .Rotary operator
 - 115.1 .Boxes, frames and gratings
 - 115.2 HOOD OR OFFTAKE
 - 115.3 .Spray booth
 - 115.4 .Hooded, air controlling, work chamber
 - 116 .Movable
 - 117 COMBINED AIR PUMP AND AIR VALVE
 - 118 WIND-MOTOR CONTROLLED VALVE
 - 119 VALVED THIMBLES
 - 120 BACK-DRAFT PREVENTER
 - 121 ROTARY RETARDER
 - 121.1 LOUVEN
 - 121.2 .Pivoted
 - 122 PIPE CAPS
- CROSS-REFERENCE ART COLLECTION
- 900 VENTILATOR USING SOLAR POWER
- DIGESTS
- DIG 6 Ventilation of roof eaves
 - DIG 7 Flexible ducts used for carrying air
 - DIG 8 Magnetic means to hold a damper closed
 - DIG 9 Black out
 - DIG 10 Sound deadening
 - DIG 11 Seat digest

JUNE 1985

- COATING OR PLASTIC COMPOSITIONS
- 1.05 ..Metal-depositing composition or substrate-sensitizing compositions for metal-depositing compositions
- 1.11 ..Sensitizing composition
- 1.12 ..Metal-depositing composition contains mixtures of elemental metal and a metal compound other than solely as a Group IA metal compound
- 1.13 ...Elemental metal is Group IB (Cu, Ag, Au)
- 1.14 Elemental metal is Ag
- 1.15 ...Elemental metal is noble metal of Group VIII (Ru, Rh, Pd, Os, Ir, Pt)
- 1.16 ...Elemental metal is Group IIB (Zn, Cd, Hg) metal
- 1.17 Elemental metal is Zn
- 1.18 ..Metal-depositing composition contains elemental metal of Group IB (Cu, Ag, Au)
- 1.19 ...Elemental metal is Ag
- 1.21 ..Metal composition contains elemental noble metal of Group VIII (Ru, Rh, Pd, Os, Ir, Pt)
- 1.22 ..Metal-depositing composition contains mixtures of metal compounds other than solely as Group IA metal compounds, e.g., electroless
- 1.23 ...At least one metal is a Group IB (Cu, Ag, Au) metal
- 1.24 ...At least one metal is a noble metal of a Group VIII (Ru, Rh, Pd, Os, Ir, Pt) metal
- 1.25 ..Metal-depositing composition contains polyvalent metal compound
- 1.26 ...Group IB (Cu, Au) metal
- 1.27 ...Group VIII metal
- 1.28 Group VIII noble metal (Ru, Rh, Pd, Os, Ir, Pt)
- 1.29 ...Group IIB (Zn, Cd, Hg) metal
- 2 ..Coating repellent
- 3 ..Polishes
- 4 ..Protein or derivative containing
- 5 ..Carbohydrate or derivative containing
- 6 ..Natural resin or derivative containing
- 7 ...With fatty oil
- 8 ...Fat, fatty oil, fatty oil acid or salt thereof containing
- 9 ...Fatty oil
- 10 ...Wax, bituminous material or tarry residue containing
- 11 ..Hydrocarbon containing
- 12 ..Saturating or indurating
- 13 ..Fog, frost or ice preventive
- 14.05 ..Corrosion inhibiting coating composition
- 14.11 ...Contains water
- 14.12 ...Phosphorus material
- 14.13 ...Carboxylic acid, ester, alcohol or sulfur or metal derivative
- 14.14 Inorganic material other than water
- 14.15 ...Organic nitrogen-containing material, e.g., amine, amide, etc.
- 14.16 Heterocyclic nitrogen-containing material
- 14.17 Inorganic material other than water
- 14.18 ...Amine salt of carboxylic acid
- 14.21 ...Inorganic material or elemental component thereof, e.g., S, metal, etc.
- 14.22 ..Contains animal, vegetable, fish oil or a fraction or derivative thereof
- 14.23 ...Carboxylic acid, ester, alcohol or metal or sulfur or amine or amide derivative thereof
- 14.24 Carboxylic acid, ester, or amine or amide derivative
- 14.25 ...Inorganic material or elemental component thereof
- 14.26 ..Contains petroleum oil or a fraction thereof
- 14.27 ...Carboxylic acid, ester, alcohol or sulfur or metal derivative thereof
- 14.28 Metal salt of carboxylic acid
- 14.29 Metal salt of sulfonic acid
- 14.31 ...Organic nitrogen-containing material, e.g., amine, amide, etc.
- 14.33 ...Inorganic material or elemental component thereof, e.g., S, metal, etc.
- 14.34 ..Contains wax, bitumen, asphalt, gum, natural resin, varnish, lacquer, or paint
- 14.35 ...Carboxylic acid, ester, alcohol or sulfur or metal derivative
- 14.36 Metal salt of carboxylic acid
- 14.37 ...Organic nitrogen-containing material
- 14.38 ...Organic sulfur-containing material
- 14.39 ...Inorganic material or elemental component thereof
- 14.41 ..Contains mixture of at least two organic compounds
- 14.42 ...Organic nitrogen-containing material
- 14.43 ...Organic sulfur-containing material
- 14.44 ..Contains mixture of organic material and at least one inorganic material or elemental component thereof
- 14.45 ...Elemental S or inorganic sulfur-containing compound
- 14.5 ..Hectographic or copying
- 15.05 ..Contains fireproofing or biocidal agent
- 16 ..Natural resin or derivative containing
- 17 ...With fat, fatty oil, fatty oil acid or salt thereof
- 18 ..Fat, fatty oil, fatty oil acid or salt thereof containing
- 18.11 ..Contains fireproofing agent
- 18.12 ...Silicon containing
- 18.13 ...Boron containing
- 18.14 ...Phosphorus containing
- 18.15 ...Nitrogen-containing phosphorus compound
- 18.16 Inorganic compound contains a phosphorus and a nitrogen atom
- 18.17 Contains phosphorus directly bonded to nitrogen
- 18.18 Phosphorus compound is organic
- 18.19 Phosphorus compound which is organic contains halogen
- 18.2 With halogen-containing compound
- 18.21 ...Nitrogen-containing organic compound
- 18.22 ...Nitrogen compound contains a sulfur atom
- 18.23 ...Elemental sulfur or sulfur-containing organic compound
- 18.24 ...Halogen-containing organic compound
- 18.25 ...With at least one inorganic material which is other than water
- 18.26 ...Metal-containing material
- 18.27 ...Group IIB metal atom (Zn, Cd, Hg)
- 18.28 ...Group VA metal atom (As, Sb, Bi)
- 18.29 ..Wax containing
- 18.3 ..Boron containing
- 18.31 ...Phosphorus containing
- 18.32 ...Nitrogen-containing compound
- 18.33 ...Nitrogen compound contains a sulfur atom
- 18.34 ...Elemental sulfur or sulfur-containing organic compound
- 18.35 ...Halogen-containing organic compound
- 18.36 ..Group IIB metal containing (Zn, Cd, Hg)
- 19 ..Marking
- 20 ..Inks
- 21 ...Invisible

JUNE 1985

COATING OR PLASTIC COMPOSITIONS		102	...With subsequent treatment
.Marking		103	...From calcium sulfate, slag, cinders or residues
..Inks			..Aluminous cement
22 ...Organic dye containing	104		..Oxy salt type cement
23 With pigment	105		...Magnesium oxy-chloride
24 ...Protein or derivative containing	106		With organic material
25 ...Carbohydrate or derivative containing	107		Cellulose or derivative
26 Cellulose or derivative	108		..Calcium sulfate
27 ...Fat, fatty oil, fatty oil acid or salt thereof containing	109		...Plaster of Paris
28 Fatty oil	110		With organic material
29 With natural resin or derivative	111		Protein or derivative
30 ...Natural resin or derivative containing	112		With other organic material
31 ...Wax, bituminous material or tarry residue containing	113		Carbohydrate or derivative
32 ...Hydrocarbon containing	114		Cellulose or derivative
32.5 .Erasable surface	115		Wax, bituminous or resinous material or tarry residue
33 .Leak stopping	116		..Slag
34 .Stains	117		..Lime
35 .Dental	118		...With organic material
36 .Tractive or friction surface	119		...Silica-lime mixtures
37 .Sound recording	120		..Magnesia
38 .Shoe filling	121		.Pore forming
38.2 .Molds and mold coating compositions	122		.Cellulose liberation liquor containing
38.22 ..Compositions for coating and lining molds	123.1		..Tall oil
38.23 ...Carbohydrate or derivative containing	123.2		.Protein or derivative containing
38.24 ...Fat, fatty oil, fatty oil acid or salt thereof containing	124		..Gelatine, glue or derivative
38.25 ...Wax, bituminous or resinous material or tarry residue containing	125		...With carbohydrate or derivative
38.27 ...Inorganic materials only	126		Cellulose or derivative
38.28 Elemental carbon containing	127		Cellulose ether or ester
38.3 ..Alkali metal silicate or inorganic settable ingredient containing	128		Gum or derivative
38.35 ...With organic material	129		Starch or derivative
38.4 ..Protein or derivative containing	130		...With fat, fatty oil, fatty oil acid or salt thereof
38.51 ..Carbohydrate or derivative containing	131		...Fatty oil
38.6 ..Natural resin or derivative containing	132		...With natural resin or derivative
38.7 ..Fat, fatty oil, fatty oil acid or salt thereof containing	133		...With wax, bituminous material or tarry residue
38.8 ..Wax, bituminous material or tarry residue containing	134		...With solvent or dispersing medium
38.9 ..Inorganic materials only	135		...With flux or plasticizer
74 .Alkali metal silicate containing	136		...With filler, dye or pigment
75 ..Pore forming	137		..Casein or derivative
76 ..With portland type cement	138		...With carbohydrate or derivative
77 ..With calcium sulfate	139		Cellulose or derivative
78 ..With lime	140		Cellulose ether or ester
79 ..With protein or derivative	141		...With fat, fatty oil, fatty oil acid or salt thereof
80 ...With carbohydrate or derivative	142		Fatty oil
81 ...Cellulose or derivative	143		...With natural resin or derivative
82 ...With fat, fatty oil, fatty oil acid or salt thereof	144		...With wax, bituminous material or tarry residue
83 ...With wax, bituminous or resinous material or tarry residues	145		...With solvent or dispersing medium
84 ...With filler, dye or pigment	146		...With flux or plasticizer
85 .Inorganic settable ingredient containing	147		...With filler, dye or pigment
86 ..Pore forming	148		..Prolamine or derivative
87 ...Gas-evolving agent	149		...With carbohydrate or derivative
88 ...Gas introduction	150		Cellulose or derivative
89 ...Portland type cement	151		...With wax, bituminous or resinous material or tarry residue
90 With organic material	152		...With flux, solvent or dispersing medium
91 Protein or derivative	153		..Seed protein or derivative
92 Carbohydrate or derivative	154.1		..Feathers, hair or leather
93 Cellulose or derivative	155		...With wax, bituminous or resinous material or tarry residue
94 Natural resin or derivative	156		...With carbohydrate or derivative
95 Fat, fatty oil, fatty oil acid or salt thereof	157		...Cellulose or derivative
96 Wax, bituminous material or tarry residue	158		..With fat, fatty oil, fatty oil acid or salt thereof
97 ...With filler, aggregate or pigment	159		..With wax, bituminous or resinous material or tarry residue
98 Silica	160		..With flux, solvent or dispersing medium
99 Fibrous	161		.Carbohydrate or derivative containing
100 ...Portland type cement making	162		..Cellulose or derivative
101 ...Color modification	163.1		...Viscose
	164		Spinning solutions
	165		With delustering agent
	166		

143

BEST COPY AVAILABLE

JUNE 1985

COATING OR PLASTIC COMPOSITIONS		221	Two or more kinds of fatty oil
167	..Carbohydrate or derivative containing	222	Drying oil
168	..Cellulose or derivative	223	With sulfurizing or sulfonating agent
169	...Cuprammonium cellulose	224	With wax
170	...Regenerated cellulose	225	With bituminous material or tarry residue
171	Cellulose ether or ester	226	With terpene or derivative
	Emulsions	227	With hydrocarbon
	With fat, fatty oil, fatty oil acid or salt thereof	228	With filler, dye or pigment
172	With natural resin or derivative	229	With wax, bituminous material or tarry residue
173.1	With natural resin or derivative	230	..With wax
174	With terpene or derivative	231	..Ester type wax
175	With ether, ester or alcohol	232	..With bituminous material or tarry residue
176	With heterocyclic compound	233	...With sulfurizing or sulfonating agent
177	With phosphorus containing compound	234	...With hydrocarbon
178	With carboxylic acid, salt or ester thereof (except wax)	235	...With filler, dye or pigment
179	Ether group containing	236	..With solvent or dispersing medium
180	Polyhydric alcohol ester	237	..Alcohol containing
181	Polycarboxylic acid, salt or ester thereof	238	..Water containing
182	Oxo- or oxy-acid or ester thereof	239	..Hydrocarbon containing
183	Lower fatty acid or ester thereof	240	..With flux
184	With aldehyde or ketone	241	..With filler, dye or pigment
185	With ether or alcohol	242	..Fibrous
186	With amine or amide	243	..Fat, fatty oil, fatty oil acid or salt thereof containing
187	With aldehyde or ketone	244	..Fatty oil
188	With ether	245	..With wax
189	With alcohol or phenol	246	...With bituminous material or tarry residue
190	With halogen containing carbon compound	247	...With sulfurizing or sulfonating agent
191	With hydrocarbon, wax, bituminous material or tarry residue	248	With filler, dye or pigment
192	With delustering agent	249	...With sulfurizing or sulfonating agent
193 R	With filler, dye or pigment	250	Two or more kinds oil
193 CK	Cork	251	With filler, dye or pigment
193 J	Inorganic pigment	252	Drying oil
193 P	Organic pigment	253	With filler, dye or pigment
193 D	Dye	254	Zinc compound
193 M	Metals	255	Lithopone
194	With metal salt	256	Lead compound
195	Cellulose nitrate	257	White lead
196	Cellulose acetate	258	Red lead
197.1	Cellulose ether	259	Iron compound
197.2	Carboxymethyl cellulose	260	Calcium compound
198	Processes	261	Carbonaceous
199	With fat, fatty oil, fatty oil acid or salt thereof	262	Pigment treatment
200	With natural resin or derivative	263	With preserving or stabilizing agent
201	With wax	264	With drier
202	With bituminous material or tarry residue	265	With hydrocarbon
203	With solvent or dispersing medium	266	With filler, dye or pigment
204	With filler, dye or pigment	267	With hydrocarbon
204.1	Cork	268	..With wax
205	..Carbohydrate gum	269	..With bituminous material or tarry residue
206	With fat, fatty oil, fatty oil acid or salt thereof	270	..Wax containing
207	With wax, bituminous or resinous material or tarry residue	271	..With solvent or dispersing medium
208	With solvent or dispersing medium	272	..With filler, dye or pigment
209	With filler, dye or pigment	273 R	..Bituminous material or tarry residue containing
210	..Starch containing	273 N	..Nitrogen containing
211	With fat, fatty oil, fatty oil acid or salt thereof	274	..With sulfurizing or sulfonating agent
212	With wax, bituminous or resinous material or tarry residue	275	With filler, dye or pigment
213	With solvent or dispersing medium	276	..Rock asphalt
214	With filler, dye or pigment	277	..Bituminous emulsion
215	With fat, fatty oil, fatty oil acid or salt thereof	278	..With solvent or dispersing medium
216	..With wax, bituminous or resinous material or tarry residue	279	..With flux
217	..With filler, dye or pigment	280	With filler, dye or pigment
218	..Natural resin or derivative containing	281 R	With filler, dye or pigment
219	..With fat, fatty oil, fatty oil acid or salt thereof	281 N	Nitrogen containing
220	...Fatty oil	282	Fibrous
		283	Water containing
		284	Coal tar or pitch containing
		285	..Hydrocarbon containing
		286.1	..Inorganic materials only containing at least one metal atom

COATING OR PLASTIC COMPOSITIONS		312	.Opacifiers for enamels
..Inorganic materials only containing at least one metal atom		313	.Ceramic fluxes
286.2	..Containing two or more diverse metal atoms in a single compound	314	.Mortar addition materials
		315	..Set regulating
		316	.Miscellaneous
286.3	..Fe or Co containing		
286.4	..Group IV metal atom (Ti, Zr, Hf, Ge, Sn, or Pb) containing		CROSS-REFERENCE ART COLLECTIONS RELATING TO
286.5	..Aluminum containing		
286.6	..Group II metal atom (Be, Mg, Sr, Ca, Ba, Ra, Zn, Cd, or Hg) containing	900	SOIL STABILIZATION
286.7	..Group I metal atom (Li, Na, K, Rb, Cs, Fr, Cu, Ag, or Au) containing	901	LOW MOLECULAR WEIGHT HYDROCARBON POLYMER-CONTAINING MIXTURE
286.8	..Inorganic materials only		DIGESTS
287.1	..Silicon containing other than solely as silicon dioxide or as part of an aluminum-containing compound	DIG 1	Fly ash
287.11	..N-containing Si compound	DIG 2	Perlite
287.12	..OH bonded directly to Si atom	DIG 3	Mica
287.13	..C bonded directly to Si atom	DIG 4	Bentonite
287.14	..H or alkyl directly bonded to Si	DIG 5	Electrical insulating titanates
287.15	..C radical bonded to Si is unsaturated	DIG 6	Phototropic
287.16	..Si-O-C bonded compound	DIG 7	Asphalt binders in coating compositions
287.17	..Aluminum compound containing	DIG 8	Glass batch ingredient pre-treat
287.18	..Heavy metal compound containing		
287.19	..Group IVA or IVB (Ti, Zr, Hf, Ge, Sn, Pb)		
287.2	..Heterocyclic (only N, O, S, Se, Te)		
287.21	..Two hetero ring atoms		
287.22	..Epoxy ring containing		
287.23	..O-containing organic compound		
287.24	..Carbonyl group containing		
287.25	...N containing		
287.26	..Hydroxy group containing or alcoholate		
287.27	..Halogen containing		
287.28	..Organic halide		
287.29	..Phosphorus or nitrogen containing		
287.3	..Nitrogen containing		
287.32	..Sulfur containing		
287.34	..Silicon dioxide containing		
287.35	..Miscellaneous		
MATERIALS OR INGREDIENTS			
288 R	..Pigments, fillers or aggregates		
288 B	...Inorganic		
288 Q	...Organic		
289	..Lake containing		
290	..Metallic powder containing		
291	..Shell, scales, mica or lamellate material		
292	..Zinc compound containing		
293	...Zinc sulfide		
294	Lithopone		
295	Subsequent treatment		
296	...Zinc oxide		
297	..Lead compound containing		
298	...Lead chromate		
299	..Titanium or zirconium compound containing		
300	...Titanium dioxide		
301	..Cadmium compound containing		
302	..Chromium compound containing		
303	..Antimony compound containing		
304	..Iron compound containing		
305	..Ultramarine		
306	..Alkali earth metal compound containing		
307	..Elemental carbon containing		
308 R	..With coating or dispersing agent		
308 B	Inorganic		
308 Q	Organic		
308 C	Carbohydrate		
308 F	Fatty substance		
308 N	Nitrogen containing		
308 P	Protein		
308 M	Rubber or synthetic resin		
308 S	Sulfonate or sulfate		
309	..Processes		
310	..Driers		
311	..Vehicles or solvents		

JUNE 1985

400	PRODUCTS	19	...Clamp
401	..Uniplanar sectional web, sheet or layer	20	..Guiding
402	..Sewn web or sheet	21	..Bock sewing
403	..Including decomposable thread or component	22	..Knitting
404	..Including feathers, beads or reflective material	23	..Straw braid
405	..With longitudinally non-extensive super-imposed panel or sheet	24	..Straw sewing
406	..Including external fastener sewn thereto	25	..Looped fabrics
407	...Hock and/or eye	26	..Preparing
408	...Button	27	..Work holding and feeding
409	..Fringed	28	..Leather sewing
410	..Tufted or looped surface	29	..Shoe sole
411	..With tufts or loops formed by floating strand-like portions	30	...Separating and indenting
412	..Of strands or strand portions joined by sewing	31	...Tack pulling
413	..Elastic strand or component	32	...Fair stitch
414	...Including non-planar component	33	...Loop lock
415	..Specific strand arrangement or relationship	34	...Tongue lock
416	...Knitted, netted or knotted	35	...Chain stitch
417	..With strip, strand or strand portion between layers or components	36	...Curved needle
418	..With strip sewn in or over seam or over edge (e.g., welt or stay)	37	...Lock stitch
419	...Channel-shaped edge binding	38	...Curved needle
420	..Fibrous or particulate layer between other layers	39	...Oscillating and rotating shuttle
421	..Including component of varying thickness	40	...Back gauges and rests
422	..Non-planar uniform-thickness material	41	...Guards
423	...Bent flange or reverse fold at edge	42	...Heating
424	Including concealed or blind stitching	43	..Waxing
425	Overedge or along offset fold	44	..Lubricating and moistening
426	Included in seam joining contiguous components	45	..Welt slitting and beveling
427	...Pleated, tucked or shirred	46	..Channeling
428	...Plural components	47	..Welt handling
429	..Filamentary material or strand-like tape sewn to surface	48	..Feeding
430	...Interlooped floating strands or strand portions	49	...Awl
431	...Around aperture (e.g., buttonhole)	50	...Needle
432	...Connecting parallel straight lines of stitching	51	..Channel guides
433	Included in overedge stitching	52	..Edge and crease guides
434	Uniting contiguous components	53	..Welt guides
435	Plural intersecting float threads	54	..Chain stitch
436	...Incorporated with or held by overedge stitching	55	..Lock stitch
437	..Apertured or open-work (e.g., buttonhole)	56	..Thread handling
438	..Chain stitch	57	...Orbital-movement loopers
439	..Ornamental stitching (e.g., embroidery)	58	...Cast-offs
440	..United components	59	...Take-ups
441	...By stitching along edge	60	...Pull-offs
2	SPECIAL MACHINES	61	...Tensions
2.1	..Mattress sewing	62	..Presser devices
2.2	..Tufting	63	...Locking
4	..Jacquard card sewing	64	..Work supports
6	..Broom sewing	65	..Tube forming
7	..Carpet sewing	66	..Fringe forming
8	..Clamps	67	..Buttonhole
9	..Rug sewing	68	..Eyelet making
10	..Bag sewing	69	..Start and stop mechanism
11	..Sewing filled sacks	70	..Cutting
12	..Sewing hats	71	..Thrum mechanism
13	..Work supports	72	..Clamp feeding
14	...Rotary	73	...With rotatable needle bar
15	..Guides and pages	74	...Right line and rotary
16	..Glove and fur sewing	75	...Vibrating needle
17	..Dyeing feature	76	...Spreading
18	..Work holding and feeding	77	...Gauging
		78	...Clamps
		79	...Attachments
		79 R	..Embroidering
		79 FF	..Turfin
		79 A	...Fluid flow
		79.5	...Pattern control
		80	...With non-eyed needle
		81	...Hand implements
		82	..Hemstitch
		83	...Universal feed
		84	..Horizontal needle
		85	...Pattern controlled
		86	...Boring
		87	...Fabric shifting
		88	...Stopping
		89	...Article attaching
		90	...Boring
		91	...Fabric shifting
			...Balancing

	SPECIAL MACHINES	141	..Hemmers
	..Embroidering	142	...Lap seam
	..Horizontal needle	143	...Adjustable
92	...Fabric shifting	144	..Tucking
93	Spring	145	...Box plait
94	...Stitch forming	146	...Spacing
95	Short thread	147	..Folding
96	...Shuttle type	148	..Fabric holding
97	...Thread take-up	149	..Fringe turning
98	...Thread tension	150	..Pressure
99	..Vertical needle	151	..Presser bar attached
100	...Attaching ornaments	152	..Strip
101	Thread	153	..Edge
102	Attachments	154	STITCH FORMING
103	...Fabric shifting	155	..Multiple machines
104	Frames	156	..Knot tying
105	..Article attaching	157	..Zigzag
106	..Hook and eye	443	..Vibrating needle
107	...Feeding	159	...Shifting looper
108	...Carriers	444	...Having indicator
109	..Eye-shank button	445	And specified electronic memory
110	...Vibrating needle	446	...Closed pattern sewing (e.g., buttonhole)
111	..Flat button	447	Including electronic memory
112	...Vibrated needle	448	Having cam actuation of needle or material feed
113	...Vibrated clamp	449	And means to change, without operator intervention, stitch width or material feed
114	..Feeding	450	...Basting stitch or skipping stitch
115	..Clamps	451	...Backstitch
116	..Attachments	452	...Having multiple needles
117	..Crocheting	453	...Having electronic memory
118	..Quilting	454	...Plural diverse patterns in series
119	..Fabric shifting	455	Having computer control of linkage intermediate motor and needle or material feed
120	...Frames	456	Including means to calculate needle or material feed parameters
121	..Infolding	457	Including programmable or detachable memory
121.1	..Darning	458	Including pattern selection means
121.11	..Pattern controlled or programmed	459	...Having cam actuation of needle or material feed
121.12	..Work carrier and support	460	Including detachable cam
121.13	..Stitch control	461	And specified material feed
121.14	..Traveling	462	And fine adjustment of stitch width or material feed
121.15	..Work carrier and support	463	And plural, selectively used cams
121.16	..Tuft making	464	Including fine adjustment of stitch width
121.17	..Feather sewing	465	Including plural, selectively used cams
121.18	..Spiral feed	466	And plural followers
121.19	..Stringing	467	...Having specified looptaker structure
121.2	..Lacing or whipping, e.g., covering rings	160	..Surging
121.21	..Sewing hemp-sole shoes	161	..Purling
121.22	..Neckties	162	..Overseaming
121.23	..Upholstery	163	..Multiple needle
121.24	..Circular line of stitch	164	..Shuttle type
121.25	..Stitch marking	165	..Chain and double chain
121.26	..Fabric tensioning	166	...Multiple looper
121.27	..Elongated articles, e.g., belt, waistband and belt loop	167	..Adjustable
121.28	..Spherical object, e.g., baseball cover sewing	168	..Convertible
121.29	..Completed-work handling	169	..Hand implements
	WORK MANIPULATING	170	..Short thread
122	..Trimmers	171	..Double-pointed needle
122.1	..Having specified stitching mechanism	172	..Overedge
122.2	...Pinker	173	..Running stitch
122.3	..Rotary cutter	174	..Crimping
122.4	...Pinker	175	..Stationary needle
125	..Manual control	176	..Blind stitch
126	..Laterally adjustable	177	..Overseaming
127	..Ply separating	178	..Work handling
128	..Needle-bar operated	179	..False hemstitch
129	..Cutters	180	..Bobbin ejector
130	..Severing	181	..Revolving-hook type
131	..Creasers and markers	182	..Timing
132	..Rufflers and gatherers		
133	..Smocking		
134	..Attachments		
135	...Vibrating blade		
136	..Guides		
137	..Binders		
138	...Strip reversing		
139	..Braiders and corders		
140	..Blind stitch		

JUNE 1985

183	STITCH FORMING	232	.Shuttles
184	..Revolving-hook type	233	..Tensioning
185	..Reciprocating bobbin	234	..Longitudinally reciprocating
186	..Vertical axis	235	..Presser devices
187	..Shuttle type	236	..Embroidering and darning
188	..Shuttle replenishing	237	..Lifting
189	..Loop spreaders	238	...With tension release
190	..Bobbin latch	239	...Automatic
191	..Rotary	240	..Detachable connections
192	...Timing	241	..Take-ups
193	...Vertical axis	242	..Pull-offs
194	..Oscillatory	243	...Automatic control
195	...Vertical axis	244	..Presser-bar controlled
196	..Reciprocatory	245	..Needle-bar actuated
197	...Longitudinal	246	..Adjustable
198	..Holders and raceways	247	..Resilient
199	..Chain or double chain	248	..Rotary
200	..Hooked needle	249	..Stationary cam
201	..Oscillating or reciprocating looper	250	..Clamp carrying
202	..Four-motion looper	251	..Thread cutting, severing or breaking
203	..Rotating looper	252	..With thread wiping
204	..Vertical-axis looper	253	..With thread disposal by air flow
205	..Feeding work material	254	..Thread chain
206	..By endless conveyor	255	..Rotary type
207	..Under tension	256	..Hot wire type
208	..Having means to align work	257	..Upper and lower threads
209	..Work of indeterminate length	258	...Single cutter
210	..Having curvate feature	259	..Upper thread
211	...Capable of feeding through 360	260	...Scissors type
212	degrees	261	...Single blade cutter
213	..Needle and helper	262	...Lower thread
214	..Clamp type	263	...Scissors type
215	..Plural differential feed means	264	...Single blade cutter
216	...Having adjustment feature	265	..Manual control
217	..Having adjustment feature	266	..Electrically actuated
218	...Stitch length	267	..Fluid actuated
219	...Reversible feed direction	268	..Thread end clamps
220	...Reversible feed direction	269	..Thread guiding or handling
221	...Rotary feed	270	..Tensioning
222	...Intermittent feed	271	..Intermittent
223	...Engaging upper side of work material	272	..Lubricating
224	...Needle acts as feed means	273	..Attachment holders
225	..Rotary feed	274	..Frames
226	..Four motion feed	275	..Heads
227	..Feed dog structure	276	..Work supports
228	..Seam finishing	277	..Guards
229	WITH TABLES OR STANDS	278	METHODS
230	..For plural sewing units	279	262.1 Tubelike workpiece, e.g., hosiery,
231	..With power control or clutch	280	262.2 necktie, etc.
232	..Conversion of foot-treadle driven	281	262.3 Workpiece manipulated by mechanical
233	machine	282	means, other than straight-line
234	ELEMENTS	283	feeding
235	..Starting or stopping	284	263.1 Headwear sewing
236	..Work sensing	285	264.1 Buttonhole or eyelet forming
237	..Thread sensing	286	265.1 Article attaching
238	..With element positioning	287	265.2 Slide fastener or zipper tapes
239	...Electrically operated	288	266.1 Ornamental stitching
240	..Fluid operated or controlled	289	266.2 Pilelike fabric forming, e.g., tufting
241	..Electrically operated or controlled	290	267.1 Blind stitch forming
242	..Thread sensing	291	268.1 Overedge
243	..Bobbin winding	292	269.1 Overedge
244	..Cooling	293	1 MISCELLANEOUS
245	..Needle	294	DIGESTS
246	..Waste extraction	295	DIG 1 Suction thread cutting
247	..Fly wheels	296	DIG 2 Air work handling
248	..Linkage systems	297	DIG 3 Pneumatic
249	..Driving mechanisms		
250	..Needle		
251	..Needles		
252	..Thread releasing		
253	..Threading structure		
254	..Setting and threading attachments		
255	..Clamping		
256	..Guiding		
257	..Revolving hocks		
258	..Bobbin tensioning		
259	..Sectional		
260	..Bobbin holders and casings		
261			

JUNE 1985

1 R	MISCELLANEOUS	670	..Simultaneously detecting
1 A	..Anti-G suits		cardiovascular condition and diverse
1 B	..Incubators		body condition
1 C	..Sleep inducers	671	...Detecting respiratory condition
1 D	..Cardiac assist devices	672	..Measuring pressure in heart or blood
1.1	RADIOACTIVE SUBSTANCE APPLIED TO BODY		vessel
	FOR THERAPY	673	...Testing means inserted in body
1.2	..Seeds and holders	674	Pressure indicator includes liquid
1.3	MAGNETIC FIELD APPLIED TO BODY FOR		column
	THERAPY	675	Pressure transducer structure
1.4	..Probes	676	...Ophthalmodynamometer
1.5	..Wire coil	677	...Force applied against skin to close
630	DIAGNOSTIC TESTING		blood vessel
631	..Endoradiosonde	678	Hand-supported occluder
632	..Measuring or detecting nonradioactive	679	Tester having two occluders, or
	constituent of body liquid by means		single occluder and separate
	placed against or in body throughout		pressurized pulse sensing cuff or
	test		cushion
633	..Infrared, visible light, or	680	Electric signal generated by sensing
	ultraviolet radiation directed on or		means responsive to pulse or
	through body or constituent released		Korotkoff sounds
	therefrom	681	Pulse-induced pressure fluctuation
634	...Light-conducting fiber inserted in		in occluder generates electric
	body		signal
635	..Electroanalysis	682	Pressure in inflatable occluder
636	..Holder for color indicator		automatically raised above
637	..Measuring physical characteristic of		systolic pressure
	blood by means placed against or in	683	Repeating pressurization cycle
	body	684	Pressure indicator includes liquid
638	..Bleeding detection		column
639	..Structure of body-contacting electrode	685	Valve structure
	or its positioning means	686	Occluder structure
640	..Electrode adhesively mounted on body	687	..Detecting blood vessel pulsation
641	...Lead attached to electrode by head	688	...Waveform graph-type pulse recorder
	and socket-type connection	689	...Pulse indicator
642	..Electrode in body	690	Entire testing assembly supported on
643	..Electrode held on body by suction		wrist
644	..Electrode or its positioning means	691	..Measuring blood flow in body portion
	extends circumferentially of body		other than heart
	portion	692	...Sensing means inserted in blood
645	..Testing aqueous humor pressure or		vessel
	related condition	693	...By detecting electrical impedance of
646	..Measuring impedance to flow of aqueous		body portion
	humor (tonography)	694	...By detecting volume of body portion
647	..Measuring acoustic impedance of eye	695	..Heart
648	..Fluid jet directed against eye	696	...Detecting heartbeat electric signal
649	..Eye vibrated	697	Testing artificially regulated or
650	..Pressure indicator includes liquid		assisted heart
	column	698	Fetal heartbeat
651	..Pressure indicator includes pointer	699	Orthogonal heartbeat electric
	swingable over scale and		signals combined to form vector
	mechanically driven by eye		signal
	contacting means	700	Detecting heartbeat electric signal
652	..Measuring force required to produce		and diverse cardiovascular
	standard or measured eye flattening		characteristic
	(applanation)	701	Sound generated by successive
653	..Detecting nuclear, electromagnetic, or		heartbeat electric signals to
	ultrasonic radiation		represent heart action
654	..Detectable material placed in body	702	Detecting arrhythmia
655	...Piston-type ram forces material into	703	Variation in duration of segment of
	body		PQRST signal waveform (e.g., QRS
656	...Using flexible catheter		complex, etc.) detected
657	Catheter guide means	704	Vertical variation of segment of
658	Catheter structure		PQRST signal waveform (e.g.,
659	..Nuclear radiation		amplitude of QRS complex, etc.)
660	..Ultrasonic radiation		detected
661	...Cardiovascular testing	705	Tachycardia or fibrillation
662	Pressure in blood vessel		detected
663	Flow in, or pulsation of, blood	706	Detecting signal repetition rate
	vessel	707	Detecting means associated with
			exercise machine
664	..Infrared radiation	708	Detecting R portion of signal
665	..Visible light radiation		waveform
666	...Cardiovascular testing	709	Switching means for activating
667	Pressure in blood vessel		different monitoring systems,
668	..Cardiovascular		signal displays, or signal
669	..Measuring resistance of capillary		recorders
	blood vessels to hemorrhage	710	Signal display or recording

149

BEST COPY AVAILABLE

DIAGNOSTIC TESTING		762	..Plural collection means (e.g., plural reservoirs or plural absorbent pads, etc.)
..Cardiovascular			
..Heart			
...Detecting heartbeat electric signal		763	..Hand-supported collector with rigid intake tube (e.g., a hollow needle, etc.)
711	Signal display or recording		
712	Magnetic recording	764	...Penetrable seal in liquid flow path to collection reservoir
....Cathode-ray tube used for display or included in recording means		765	...Mechanical means for drawing liquid into collection reservoir
713	...Blood output per beat or time interval	766	...Means for controlling liquid flow
714	...Detecting heartbeat by sensing movement of oscillatable body-supporting means	767	..Wall of collection reservoir formed of flexible material
715	...Detecting heart sound	768	..Flexible collection tube inserted in body
716	..Respiratory	769	..Collection receptacle bodily placed within body
717	..Halitosis detection	770	..Collector combined with lancet
718	..Measuring metabolic rate by breath test	771	..Indicator
719	..Qualitative or quantitative analysis of breath component	772	..Flexible catheter guide
720	..Measuring respiratory flow impedance or lung elasticity	773	..Detecting sound generated within body
721	..Detecting body movement attending breathing	774	..Measuring anatomical characteristic or force applied to or exerted by body
722	...Capacitor-type transducer	775	..Associated with birth
723	...Detector responsive to movement induced variation in impedance of body to electric current	776	..Gum
..Thermistor-type transducer generating electric signal in response to breath flow		777	..Mouth, tongue, or jaw
		778	..Vagina or uterus
		779	..Foot
724	..Measuring breath flow or lung capacity	780	..Esophagus, stomach, or lower alimentary canal
725	...Element rotated by breath flow	781	..Spine
726	...Breath exhaled into or inhaled from expansible chamber	782	..Body movement (e.g., head or hand tremor, motility of limb, etc.)
727	Bellows or expansible bag	3	..Specula
728	Liquid surface forms portion of chamber boundary	4	..Endoscopes
729	..Breath collection	5	...Fenestrated
730	..Detecting brain electric signal	6	...Illuminating
731	..With feedback of signal to patient	7	Cystoscopes and urethoscopes
732	..Detecting muscle electric signal	8	Gastrosopes
733	..Measuring electrical impedance or conductance of body portion	9	Otosopes
734	..Locating acupuncture points	10	..Pharyngoscopes
735	..Temperature detection	11	...Illuminating
736	..Detecting foreign object or calculus by probing	12	..Non-pivoted gags
737	..Monitoring fertility cycle	13	...Illuminating
738	..Sensitivity to vibration	14	...Veterinary
739	..Sensitivity to impact	15	..Tongue depressors
740	..Sensitivity to electric stimulus	16	...Illuminating
741	..Sensitivity to thermal stimulus	17	..Pivoted
742	..Sensitivity of skin to allergens or radiation	18	...Illuminating
743	..Touch or pain response of skin	19	...Veterinary
744	..Eye or testing by visual stimulus	20	..Retractors
745	..Ear or testing by auditory stimulus	21	..Reflectors
746	..Injecting gas into body canal or cavity	22	..Illuminating
747	..Measuring fluid pressure in body	23	..Lamps
748	..Sampling non-liquid body material (e.g., bone, muscle tissue, epithelial cells, etc.)	24 R	KINESITHERAPY
749	..Irrigation	24 A	..Ultrasonic
750	..Cutting	24.1	..With light, thermal and electrical application
751	...Applying suction to sample	24.2	..Appliances with applicators having specific movement
752	Body pierced by tubular cutter or rod-type punch	24.3	...Rolling
753	Body pierced by tubular cutter or rod-type punch	24.4	...Electrical application
754	...Motorized	24.5	...Electrical application
755	..Brushing	25 R	..Exercising appliances
756	..Scraping with edged instrument	25 A	...Eye exercisers
757	...Applying suction to sample	25 B	...Foot exercisers
758	..Wiping or dabbing	26	..Hand and finger
759	..Liquid collection	28	..Artificial respiration
760	..Means specifically structured for collecting urine of human female	30	..Produced by vacuum and compression
761		30.2	...Conforms to shape of torso portion
		31	..Obstetric
		32	..Vibrators
		33	..Couch, chair or other support
		34	..Unbalanced weight
		35	...Motor operated
		36	Electric motor
		37	Fluid motor
		38	..Fluctuating fluid column

JUNE 1985

	KINESITHERAPY	593	Metal plate only
	..Vibrators	594	Comprising fluid cushion
	...Fluctuating fluid column	595	Comprising moldable composition, e.g., "plastic"
39	...Diaphragm actuated		Adjustable position or shape
40	...Pressure interrupted	596	By screw means
41	..Vibrant armature	597	With multiple screws
42	..Reciprocating weight	598	By spring placement
43	..Vibrant slide	599	By shims
44	..Appliances with applicators having specific movement	600	With plural selective positioning means
45	..Gyratory, motor operated	601	Comprising alternatively usable fastening elements on insert
46	...Electric motor		Comprising prongs
47	...Fluid motor	602	Comprising snap fasteners
48	..Oscillatory, motor operated	603	Comprising multiple alternately usable pockets
49	...Electric motor	604	With pockets
50	...Fluid motor	605	For the longitudinal arch
51	..Reciprocatory, motor operated	606	Single rigid metal plate only
52	...Electric motor	607	Including metal spring means
53	...Fluid motor	608	Built into a boot or shoe
54	..Percussing	609	Sling type
55	..Motor operated	610	Including arch-contacting metal plate
56	..Rotary	611	Wedge on sole only
57	..Rolling	612	With heel support
58	...Belt supported	613	And metatarsal support
59	..Pinching	614	With metal reinforcing means
60	..Kneading	615	Integral
61	..Manipulating	616	Metal plate only
62 R	..Frictioning	617	Comprising multiple layers
62 A	Gum massagers	618	Including metal spring means
63	...Belt	619	With metatarsal support
64	..Vibrant membrane	620	Comprising multiple layers
65	..Lavative	621	Metatarsal support integral with shank stiffener
66	...Fluid current		
67	..Applicators		
68	ORTHOPEDICS		
68.1	..With light, thermal and electrical application	81 R	..Toe
69	..Osteal adjusters	81 A	Toenail appliances
70	..Couches	82	BANDAGING
71	...Extension	82.1	..With light, thermal and electrical application
72	...Gap intermediated the ends	83	..Fracture apparatus
73	...Pivoted to pedestal	83.5	..With walking devices
74	...Pivoted intermediate the ends	84 R	..Extension appliances
75	..Extension appliances	84 A	Bowed leg splint
76 R	..Head	84 B	Fracture reducing frames
76 B	...Wrinkle eradicators	84 C	Portable traction applicators
76 C	...Nose shapers	85	...Splints
76 D	...Horn benders	86	Box
76.5	..Eye	87 R	...Splints
77	..Arm and hand	87 A	Finger splints
78	..Body	87 B	Cervical traction splint
79	..Genital	87 C	Abduction splint
80 R	..Leg and foot	88	Hinged
80 A	...Abduction braces	89 R	Shaped and shapable
80 B	...Bowed limb braces	89 A	Shaped head splint
80 C	...Knee braces	90	Plastic
80 D	...Arch supports	91 R	Plaster of paris
80 DB	...Equipment for testing foot	91 A	Cast cutters and removers
80 E	...Drop-foot braces	92 R	...Bone
80 F	...Pivotable leg braces	92 A	Externally applied bone engaging splints
80 G	...Muscle assist systems		Bone fasteners
80 H	...Ankle braces	92 B	Femoral nails
80 J	...Club-foot braces	92 BA	Femoral screws
581	..Boots, shoes and inserts	92 BB	Intramedullary
582	...With means to massage foot	92 BC	Bone prosthesis
583	...With means to turn foot about long axis of leg	92 C	Femoral head
584	...With means to turn foot about its long axis	92 CA	Internal fracture plate
585	...With means to turn foot about its long axis	92 D	Bone engaging instruments
586	...Arch support	92 E	Clamps and forceps
587	...With suction retaining means	92 EA	Drill and nail guides
588	...With ventilating means	92 EB	Impactors and extractors
589	...Comprising outside shank stiffener	92 EC	Nail benders
590	Shank integral with heel or sole	92 ED	Osteotomy guides, fixtures and jigs
591	Adjustable	92 H	Osteosynthesis
592	Including metal spring means	92 G	...Box
		93	

	BANDAGING	464	...Strand-type fabric with thermoplastic fibers or filaments
94	..Fracture apparatus	465	..With stiffening strips, strands, or stays, e.g., wired
425	..Slings	466	...Cup form includes spirally arranged strip
426	..Breast or chest, e.g., brassieres	467	...Woven or braided strand-type fabric, e.g., wire gauze
427	..With shoulder or back brace	468	...Cup form includes latticework of strips
	..With midriff covering extension terminating adjacent waistline, e.g., "longline"	469	...Paired strips or stays for cup rims with connecting span
428	...With additional means interiorly attached to extension to support the diaphragm area	470	With separable joint between paired stays
429	...Midriff extension includes overlapping relatively-movable parts	471	Annular cup-rim-encircling stays
430	...With means to attach extension to subjacent body-supporter or garment, e.g., hold-downs	472	Stays with connecting span form U, V, H, or V shape between the breasts
431	..Combined with subjacent body supporters, e.g., foundation garment	473	Cup fabric has tunnels separably retaining joined stays
432	...Including plural superimposed supporting panels or bands	474	...Plural separate stays diagonally crossing between cups
433	With separable closure for each layer	475	...Annular cup-rim encircling stay individual to one cup
434	Each layer separately encircles body	476	...Single stay individual to one cup with arcuate portion along bottom rim of cup, e.g., U-shaped
435	...Including apparel-type garment	477	..With stiffened supporting means contacting only lower half of breasts
436	...Vertically slidable overlapped portions between breast and torso support	478	..With means to separably retain breast-form-supplementing pads
437	With elastically extensible connector	479	..With cup-supplementing means to add volume to breast, e.g., pads
438	...Detachably secured to subjacent supporter by separable fasteners	480	...Applied to only lower half of breast
439	...Subjacent supporter unattached at front	481	...Pads per se
440	...Subjacent supporter unattached at back	482	..Separable at front center
441	...Front center separable closure for both breast and torso support	483	..With cup supplementing uplift straps or slings diagonally crossing at front center
442	...With size adjustment for both, e.g., maternity type	484	..With floatingly attached cup-supplementing breast supporting strip or panel
443	...Including plural elastic panels or inserts with diversely oriented lines of elasticity	485	...Forming breast-receiving pouch with cup bottom
444	...Including elastic portions with varying modulus of elasticity	486	...Supplementary means includes body-girdling straps
445	...Including elastic portion with stretch inhibitor or limiter	487	...Attaching means includes adjustment feature
446	...Subjacent supporter includes crotch member	488	..Straps narrow bands only, i.e., skeletal type
447	...Wrap-around overlapped type torso support	489	..Elastically expansible cup or cup rim
448	...Including panels having pleats or folds to permit size increase	490	...All-elastic cup
449	...Step-wise girth adjustment	491	...Expansible cup rim, e.g., elastic shirring
450	...With separable fastener or connector for apparel-type garment	492	..With means to vary size of breast cups
451	...Low cut at back	493	...By vertical gathering of material between the cups
452	..With separable fastener or connector for apparel-type garment	494	..Cups joined to common subjacent elastic strip or panel
453	...For hosiery	495	..With variable length connector between cups
454	..Combined with apparel-type garment	496	...Elastic connector
455	...Breast supporting member within other garment	497	With additional non-elastic connector means
456	...Removable breast supporter	498	..Including plural elastic panels or inserts with diversely oriented directions of elasticity
457	...Subjacent garment attached at front only	499	..Including elastic portions with variable modulus of elasticity
458	...With means providing girthwise elasticity for brassiere	500	..Including elastic portion with stretch inhibitor or limiter
459	Portion of garment covers elastic connector at back	501	..With girthwise inelastic size adjustment additional to separable closure
460	..Closable aperture permits access to breast, i.e., nursing type	502	..With means to gather peripheral edge, e.g., drawstring
461	..With lacteal fluid receptor or shield		
462	..With inflatable or liquid-containing chambers		
463	..Molded reshaped shell-like cup, e.g., plastic latex		

JUNE 1985

- BANDAGING
- 503 ..Breast or chest, e.g., brassieres
 - ..Body band has overlapping separately secured ends
 - 504 ..Resilient body-clasping band
 - 505 ..With adhesive means or vacuum cup to secure to body
 - 506 ..Body-embracing band includes detachable connector unit
 - 507 ..Body-embracing band means includes vertically-spaced portions
 - 508 ...One portion is narrow waist-encircling band
 - 509 ..Extended length wrap-around body bands
 - 510 ..Shoulder strap arrangements and connecting features
 - 511 ...Connected by floating extension at or below horizontal mid-cup region
 - 512 ...Detachable, e.g., convertible to strapless
 - 513 ..With compartment for carrying articles, e.g., coin pocket
 - ..With reinforcing stitching
 - 514 ..Reversible
 - 515 ..Methods of making or assembling
 - 516 ..Materials
 - 95 ..Trusses
 - 96 ..Abdominal
 - 97 ..Head
 - 98 ..Perineal
 - 99 ..Supports
 - 100 ...Belt wholly flexible
 - 101 ...Elastic in part
 - 102 ...Belt and frame
 - 103 ...Frame hinged
 - 104 ...Frame wholly metallic
 - 105 ...Frame with auxiliary straps
 - 106 ...Pad carriers
 - 107 ...Detachable
 - 108 Pivoted
 - 109 Resilient
 - 110 Clamped
 - 111 Resilient
 - 112 ..Pads
 - 113 ...Composition
 - 114 ...Medicating
 - 115 ...Rigid
 - 116 ...Adjustable center
 - 117 ...Resilient
 - 118 Inflated
 - 119 Spring
 - 120 Stuffed
 - 121 ..Connections
 - 122 ...Ball and socket
 - 123 ...Hinged
 - 124 ...Clamped
 - 125 ...Resilient
 - 126 Spring only
 - 127 ..Pessaries
 - 128 ..External support
 - 129 ..Inflated
 - 130 ..Intrauterine
 - 131 ...With cervical cup
 - 132 R ..Shields
 - 132 D ..Surgical drape
 - 133 ..Restraints
 - 134 ...Body
 - 135 Supination
 - 136 ...Mouth
 - 137 Stammering
 - 138 R ...Sexual
 - 138 A Electrical detection of bed wetting
 - 139 ...Breath deflectors
 - 149 ..Chafing
 - 150 ...Nipple, e.g., nursing devices
 - 151 ..Ear
 - 152 ...Antiphone
 - 153 ..Toe and foot
 - 154 ..Vaccination
 - 518 R ..For lower torso including thighs, e.g., corsets, girdles
 - 518 B ...Rib belts
 - 519 ..Combined with apparel type garment
 - 520 ..With shoulder or upper back brace
 - 521 ..Comprising sheet rubber or deposited rubber or latex
 - 522 ..With means bridging or filling out hollows in the body
 - 523 ..With individual buttock-receiving concavities
 - 524 ..With crotch or leg straps or leg-encircling parts
 - 525 ...Upper-leg-encircling compressor, e.g., thigh reducers
 - 526 ...With detachably connected crotch piece
 - 527 Completely removable
 - 528 ...Including crotch piece, e.g., panty girdle
 - 529 With opening therethrough, e.g., overlapped panels
 - 530 ...Leg anchors
 - 531 ..Comprising latticework of narrow strips or bands, e.g., skeletal
 - 532 ..With apertured insert-type panel for ventilation
 - 533 ..With stiffener for upper margin, terminating substantially above lower margin, e.g., waist-line anti-roll
 - 534 ..With means to supportingly engage apparel-type garment, e.g., skirt supporters
 - 535 ...Hosiery supporter
 - 536 ..With means to resist vertical motion on body, e.g., friction grips
 - 537 ...Over-shoulder straps
 - 538 ..With stiff or non-flaccid body-supporting plate or panel
 - 539 ..With elastic portions having means to limit or control stretching thereof
 - 540 ..Elastic in entirety (may include non-elastic closures or girth adjusters)
 - 541 ...Edge joined multi-panel
 - 542 With non-parallel lines of elasticity
 - 543 ..Belt-operated lacing for closures or adjusters
 - 544 ..Vertically slidable overlapped portions, e.g., "telescoping"
 - 545 ..One portion laced through aperture in another portion
 - 546 ..With superimposed supporting panels or bands
 - 547 ...At least one layer includes elastic feature
 - 548 Superimposed elastic layers having non-parallel lines of elasticity
 - 549 ...Layers are readily separable (detachable) one from another
 - 550 With selectively different assembled positions
 - 551 ...Each layer circumferentially separable, with closure
 - 552 ...Each layer substantially separately encircles body
 - 553 ..Having pretensioning means bridging girthwise closure
 - 554 ..Elastic portions have non-parallel lines of elasticity
 - 555 ..Elastic bands or panels with varying modulus of elasticity or with stretch limiter
 - 556 ..With elastic band, panel, or portion, e.g., gussets

- BANDAGING
- .For lower torso including thighs, e.g., corsets, girdles
 - ..With elastic band, panel, or portion, e.g., gussets
 - 557 ...Detachably secured to garment
 - 558 ..Girth adjustment by predetermined increments
 - 559 ...With insertable or removable girth-changing units
 - 560 ..Having girth adjuster and separate nonadjustable separable fastener for closure
 - 561 ..With plural separately-acting girth dimension adjusters
 - 562 ...Vertically spaced
 - 563 ..With stays at closure edges having nonflaccid inter-engaging fastening means
 - 564 ..Plural disconnectable panels with selectively different assembled positions
 - 565 ..Lacing-type closure with flaccid lace-receiving eyelet or loop
 - 566 ..Closures or girth adjusters with interiorly disposed chafing shield
 - 567 ..With stiffening strips or stays
 - 568 ...Including stay-reinforcers at waistline or broken stay shields
 - 569 ...Movably articulated directly one to another
 - 570 ...Readily separable from supporter, e.g., from pockets
 - 571 ...Having means to interengage with lacing cord
 - 572 ..With closure means for access opening at lower rear margin of buttock-girdling member
 - 573 ..With insertable or removable panel unit, e.g., "convertible"
 - 574 ..With article carrying pockets
 - 575 ..Panels reinforced by tapes or bands
 - 576 ..With loops for donning
 - 577 ..Protective covers, liners, or shields
 - 578 ..Waist-line type, i.e., limited vertical extent
 - 579 R ..Abdominal uplifting sling type
 - 579 B Abdominal bandages
 - 580 ...Materials and making, e.g., pattern layouts
 - 155 .Bandages
 - 156 ..Material and making
 - 157 ...Member inclosing
 - 158 ...Suspensory
 - 159 Garment attached
 - 160 Compressive
 - 161 Separable sack
 - 162 Sacks
 - 163 ..Head and face
 - 164 ...Chin supporter
 - 165 ..Arm and leg
 - 166 ...Ankle
 - 166.5 ...Arch
 - 168 ..Perineal support
 - 169 ..Bands
 - 170 ...Roller
 - 171 ...Retainers
 - 200.11 MEANS FOR PASSING RESPIRATORY GAS THROUGH BODY OF LIQUID BEFORE INHALATION
 - 200.12 .Pocket type
 - 200.13 .Plural orifice means passing gas into liquid
 - 200.14 LIQUID MEDICAMENT ATOMIZER OR SPRAYER
 - 200.15 .With tongue depressor
 - 200.16 .Ultrasonic
 - 200.17 .Rotating
 - 200.18 .Spray impinged against baffle in or adjacent flow conduit
 - 200.19 .Means for selectively dispensing different fluids
 - 200.21 .Gas stream aspirating medicament from reservoir
 - 200.22 ..Gas flow induced by expansion chamber device (e.g., piston/cylinder ram, squeeze bulb, etc.)
 - 200.23 .Pre-pressurized container holding medicament
 - 200.24 RESPIRATORY METHOD OR DEVICE
 - 200.25 .Artificial gill, or means for separating entrained air from liquid stream
 - 200.26 .Means placed in body opening to facilitate insertion of breathing tube
 - 200.27 .Gas stream directed away from face mask to penetrate contaminated atmosphere
 - 200.28 .Body or head supported means, other than face mask or hood, with gas stream to screen face or penetrate contaminated atmosphere
 - 200.29 .Underwater exhalation dispersing means
 - 201.11 .Draw-type snorkel
 - 201.12 .Corrective or magnifying lens combined with face mask having eyepiece or transparent viewing portion
 - 201.13 .Inhaled gas heated or humidified by exhaled gas
 - 201.14 .Viewing strip slidable relative to mask
 - 201.15 .Means for keeping viewing member (e.g., eyeglass, transparent face shield, etc.) clear
 - 201.16 ..Wiper
 - 201.17 ..Mask with porous lower filtering portion and impervious upper portion shielding user's eyeglasses from exhaled breath
 - 201.18 .Means for preventing nasal inhalation
 - 201.19 .Means for transmitting, or facilitating, voice communication from face mask, hood, or helmet
 - 201.21 .Using liquified oxygen
 - 201.22 .Including body or head supported means covering user's scalp
 - 201.23 ..And nose and mouth also covered
 - 201.24 ...Face mask, visor, or like face-covering means hinged to scalp covering means
 - 201.25 ...Means for removing substance from respiratory gas
 - 201.26 ...Including means inserted in mouth
 - 201.27 ...Diving or swimming apparatus
 - 201.28 ...Having valve, or valve control, structure
 - 201.29 ...Garment associated with head cover
 - 202.11 Flight suit
 - 202.12 .Hypobaric body chamber
 - 202.13 .Combined with or convertible to a nonrespiratory device, or having nonrespiratory function other than hyperbaric treatment
 - 202.14 ..Having buoyancy chamber
 - 202.15 ..Having means for facilitating ingestion of food or drink
 - 202.16 ..Means effecting nonrespiratory medical treatment
 - 202.17 ...Device usable either as inhaler or means for rubbing medicament on body surface
 - 202.18 ..Pillow or other support exclusively for head
 - 202.19 ..Garment
 - 202.21 .Smoking device simulator
 - 202.22 .Means for indicating improper condition of apparatus

JUNE 1985

- RESPIRATORY METHOD OR DEVICE
- 202.23 ..Means for preventing electric shock or arcing
- 202.24 ..Means for protecting user from pressure wave or flame resulting from gas ignition
- 202.25 ..Ozone or ion generation
- 202.26 ..Gas produced by electrolysis or chemical reaction
- 202.27 ..Means for quickly connecting or disconnecting apparatus components
- 202.28 ..Means using rescuer's breath for supplying respiratory gas to another person
- 202.29 ..Movable wall separating breath of rescuer and victim
- 203.11 ..Valved
- 203.12 ..Means for mixing treating agent with respiratory gas
- 203.13 ..Means for supplying anesthetic under patient's control
- 203.14 ..Control means responsive to condition other than user's airway pressure
- 203.15 ..Particulate treating agent carried by breathed gas
- 203.16 ..Means for mixing respiratory gas with water vapor and another treating agent
- 203.17 ...Electrically heated means producing water vapor
- 203.18 ..Means for mixing treating agent with oral exhalation and directing mixture into nasal passage
- 203.19 ..Means for controlling gravity flow of treating agent from holder
- 203.21 ..Means broken or pierced to supply treating agent
- 203.22 ..Means for supplying, or permitting inhalation of, separate streams of treating agent/respiratory gas mixture through nasal passages
- 203.23 ..Pocket-type draw tube having discharge aperture for air/treating agent mixture at end thereof
- 203.24 ...With gas flow control means other than pivotal or removable closure
- 203.25 ..Means for varying treating agent/respiratory gas ratio
- 203.26 ..Means for heating treating agent, respiratory gas, or mixture thereof
- 203.27 ...Electric
- 203.28 ..Including expandable bag, bellows, or squeeze bulb
- 203.29 ..Including face mask covering nose and mouth
- 204.11 ..Treating agent holder solely supported by head
- 204.12 ...Holder solely supported by nose
- 204.13 ..Treating agent evaporated from extended surface absorbent (e.g., sponge, fibrous wick, screen, etc.)
- 204.14 ..Respiratory gas passed over surface of liquid treating agent in reservoir
- 204.15 ..Means for cooling respiratory gas or respiration device
- 204.16 ..Substance removed from respiratory gas by cooling
- 204.17 ..Means for heating respiratory gas or respiration device
- 204.18 ..Means for supplying respiratory gas under positive pressure
- 204.19 ..Permanent magnet included in gas flow control means
- 204.21 ..Electric control means
- 204.22 ...Means for sensing partial pressure, or amount, of component in gas mixture
- 204.23 ...Means for sensing condition of user's body
- 204.24 ..Fluidic control device utilizing Coanda effect or jet impingement to alter fluid flow
- 204.25 ..Gas stream passed through jet nozzle or venturi passage
- 204.26 ..Gas supply means responsive to breathing
- 204.27 ...Snap action toggle included in control mechanism
- 204.28 ...Bag or bellows included in control mechanism
- 204.29 ..Control means responsive to variation in ambient pressure
- 205.11 ..Means for varying air/oxygen ratio
- 205.12 ..Means for removing substance from respiratory gas
- 205.13 ..Respiratory gas supplied from expandable bag, bellows, or squeeze bulb
- 205.14 ...Means for adjusting gas volume delivered to user from bag, bellows, or bulb during inflation-deflation cycle
- 205.15 ...Held in pressurizable housing
- 205.16 ...Biased to contracted or expanded position by mechanical means (e.g., weight, spring, etc.)
- 205.17 ...Rebreathing bag or bellows
- 205.18 ..Gas supplied by piston pump
- 205.19 ..Suction means for assisting exhalation
- 205.21 ..Means broken or pierced to supply gas
- 205.22 ..Gas container supported on body
- 205.23 ..Indicator structure
- 205.24 ..Valve, or valve control, structure
- 205.25 ..Face mask covering a breathing passage
- 205.26 ..Atmosphere enclosure (e.g., oxygen tent, hyperbaric chamber for pressurizing whole body, etc.)
- 205.27 ..Means for removing substance from respiratory gas
- 205.28 ..Carbon dioxide
- 205.29 ..Particulate filtering
- 206.11 ...Including means inserted in nasal passage
- 206.12 ...Face mask covering a breathing passage
- 206.13 Mask attached to ear
- 206.14 Mask adhesively attached to face
- 206.15 With gas flow control valve
- 206.16 With frame, shaping means, reinforcement, or filter formed of wire
- 206.17 With separate filter encircling element, or housing, securing filter on mask
- 206.18 Covering nose only
- 206.19 Body of mask, other than viewing means, formed of porous filter material (e.g., surgical mask formed entirely of cloth, etc.)
- 206.21 ..Face mask covering a breathing passage
- 206.22 ..Means for handling liquid (e.g., saliva, breath condensation, etc.) accumulated in mask
- 206.23 ..Mask/eyepiece sealing structure
- 206.24 ..Mask/face sealing structure
- 206.25 ...Adhesive
- 206.26 ...Closed air-filled passage adjacent mask edge (e.g., tubular bead, etc.)
- 206.27 ..Means holding mask readily accessible for use
- 206.28 ..Covering nose and mouth
- 206.29 ...Including means inserted in mouth
- 207.11 ...Structure of means securing mask to head

RESPIRATORY METHOD OR DEVICE

- ..Face mask covering a breathing passage
- ..Covering nose and mouth
- 207.12 ...Valve for controlling gas flow
- 207.13 ..Covering nose only
- 207.14 ..Respiratory gas supply means enters mouth or tracheotomy incision
- 207.15 ..Breathing passage occluder
- 207.16 ..Valve for controlling gas flow
- 207.17 ..Holding strap extending circumferentially of head or neck
- 207.18 ..Respiratory gas supply means enters nasal passage

Former subclasses 207.19 to 274

(MEDICATORS) of Class 128, Surgery have been reclassified in Class 604, Surgery. Class 604, Surgery is considered an integral part of Class 128, Surgery and follows the schedule hierarchy of Class 128. In addition, Class 604 retains all definitions and class lines established in and for Class 128.

Former subclasses 275 to 302 (RECEPTORS) of Class 128, Surgery have been reclassified in Class 604, Surgery. All statements in the preceding paragraph in respect to hierarchy and definition relationship between Class 128 and 604 apply to this area as well.

303 R INSTRUMENTS

- 303 A ..Elastic band appliers
- 303 B ..Stereotactic devices
- 303.1 ..with light, thermal and electrical application
- 303.11 ..Dilators
- 303.12 ...Heat application
- 303.13 ..Electrical application
- 303.14 ...Cutting
- 303.15 Endoscopic
- 303.16 Tonsillotomy
- 303.17 ...Coagulation
- 303.18 ...Needle
- 303.19 ...Surgical needle supports
- 304 ..Curettes and scrapers
- 305 ..Cutters
- 305.1 ..Trepan
- 305.3 ..Tracheotome
- 305.5 ..Dermatome
- 306 ..Castrating
- 307 ..Embryotomy
- 309 ..Tonsillotomy
- 310 ..Trepine
- 311 ..Urethrotomy
- 312 ..Rongeur
- 313 ..Snout
- 314 ..Lancet
- 315 ...Scarificator
- 316 ..Markers
- 317 ..Saw
- 318 ..Shear
- 319 ..Crushers
- 320 ..Ecraseur
- 321 ..Forceps
- 322 ..Artery
- 323 ..Obstetric
- 324 ...Veterinary
- 325 ..Hemostatic devices
- 326 ...Ligators
- 327 ...Tourniquets
- 328 ..Lithotrites and other bladder instruments
- 329 R ..Puncturing
- 329 A ...Acupuncture needle
- 330 ..Ring, tag, hair, etc. inserters
- 333 ..Scarifiers

- 334 R ..Suturation or wound-closing devices
- 334 C ...Two-piece connectors
- 335 ...Coaptators
- 335.5 ...Sutures and ligatures
- 336 ...Hoof-crack devices
- 337 ...Serrefines
- 339 ...Needles
- 340 Inserters
- 341 ..Dilators
- 342 ..Nasal
- 343 ..Tubular
- 344 ..Inflatable
- 345 ..Expanding arm
- 346 ..Clamps
- 348.1 ..Cannula
- 352 ..Tractors, obstetric
- 353 ..Hook
- 354 ..Tweezers
- 355 ..Dermatological devices
- 356 ..Probangs
- 357 ..Brush
- 359 ..Teething devices
- 360 ..Nipples
- 361 ..Obstetric devices
- 362 LIGHT, THERMAL AND ELECTRICAL APPLICATION
- 363 ..Exercising
- 364 ..Push and pull
- 365 ..Bathing apparatus
- 366 ..Shower baths
- 367 ..Vapor baths
- 368 ...For body member
- 369 ..Tubs
- 370 ...For body member
- 371 ..Cabinets
- 372 ..Solar
- 373 ..Recumbent
- 374 ..Erect with head outside
- 375 ...For body member
- 376 ..Couches, beds, chairs, and seats
- 377 ..Chairs and seats
- 378 ...With current generator
- 379 ..Body wear
- 380 ..Head, face and neck
- 381 ..Hand
- 382 ..Foot
- 383 ...Insoles
- 384 ..Bands and belts
- 385 ...With attachments
- 386 ...Genital
- 387 ...With current regulator
- 388 ...With adjustable electrode
- 389 ...With galvanic electrode
- 390 ..Plasters
- 391 ..Battery elements
- 392 ...Link type
- 393 ..Brushes and combs
- 394 ..Canes and sticks
- 395 ..Light applicators
- 396 ..Lamp and casing
- 397 ...With transparent rod
- 398 ..Transparent rods
- 399 ..Thermal applicators
- 400 ...With fluid supply
- 401 ..Internal application
- 402 ..Body member inclosing
- 403 ..Thermal material receptacles
- 419 R ..Electrical systems
- 419 N ...Environmental condition systems
- 419 E ...Bladder stimulators
- 419 F ...Bone growth stimulators
- 419 G ...Respiration stimulators
- 419 P ...Pacemakers
- 419 PG Pulse generating circuits
- 419 PS Power supply and battery charging circuits
- 419 PT Component or characteristic test... circuits

JUNE 1985

LIGHT, THERMAL AND ELECTRICAL

APPLICATION

- .Electrical systems
- 419 D ...Defibrillators
- 419 S ...Shock therapy
- 419 B ...Biological power supply
- 419 C ...Carotid sinus nerve stimulators
- 420 R ...Combined circuits
- 420 A ...Interferential current stimulators
- 421 ..Pulsating and alternating
- 422 ...Oscillation circuits
- 423 R ...Circuit interruption
- 423 W Leg muscle stimulators
- 424 Magnetic vibrators
- 783 ..Electrical energy applicator
- 784 ..Placed in body
- 785 ...Anchored
- 786 ...Catheter type
- 787 ...Mouth
- 788 ...Rectum, vagina, or uterus
- 789 ...External auditory canal
- 790 ..Rotated while contacting body
- 791 ..Head-supported
- 792 ...Mounted on, or consisting of, mask covering nose and chin
- 793 ...Overlying eye
- 794 ..Applying current to male genital organ
- 795 ..Applying current to foot
- 796 ..Applying current to hand
- 797 ...Writing instrument
- 798 ..Flexible sheet or resilient pad
- 799 ..Currents simultaneously applied along plural paths in body
- 800 ..Hand-held
- 801 ...Battery-holding grip
- 802 ..Means for holding applicator against body
- 803 ..Means for wetting contact point between applicator and body
- 804 ..High frequency radiation

CROSS-REFERENCE ART COLLECTIONS

- 900 BLOOD PRESSURE RECORDER
- 901 SUPPRESSION OF NOISE IN ELECTRIC SIGNAL
- 902 BIOLOGICAL SIGNAL AMPLIFIER
- 903 RADIO TELEMETRY
- 904 TELEPHONE TELEMETRY
- 905 FEEDBACK TO PATIENT OF BIOLOGICAL SIGNAL OTHER THAN BRAIN ELECTRIC SIGNAL
- 906 MULTIPHASIC DIAGNOSTIC CLINIC
- 907 ACUPUNCTURE
- 908 PATIENT PROTECTION FROM ELECTRIC SHOCK
- 909 BREATHING APPARATUS WITH MEANS FOR PREVENTING PATIENT CROSS-CONTAMINATION
- 910 ANESTHESIA GAS SCAVENGING SYSTEM
- 911 UNILIMB INHALATION-EXHALATION BREATHING TUBES
- 912 CONNECTIONS AND CLOSURES FOR TUBES DELIVERING FLUIDS TO OR FROM THE BODY
- 913 BREATHABLE LIQUIDS
- 914 REBREATHING APPARATUS FOR INCREASING CARBON DIOXIDE CONTENT IN INHALED GAS

DIGESTS

- DIG 1 Motorized syringe
- DIG 3 Heart-lung
- DIG 6 Intravenous injection support
- DIG 7 Servo-systems
- DIG 8 Collagen
- DIG 10 Fluid amplifiers
- DIG 12 Pressure infusion
- DIG 13 Infusion monitoring
- DIG 14 Teflon
- DIG 15 Velcro
- DIG 18 Heat shrinkable film
- DIG 19 Clavicle splint

- DIG 20 Inflatable splint
- DIG 21 Silicone
- DIG 22 Blood coagulation
- DIG 23 Cervical collars
- DIG 24 Medical-surgical bags
- DIG 25 Artificial sphincters and devices for controlling urinary incontinences
- DIG 26 Cannula supporters
- DIG 27 Cryogenic

157

BEST COPY AVAILABLE

JUNE 1985

270	ANTISMOKING PRODUCT OR DEVICE, I.E., DETERENT	66.2	With transverse or longitudinal compression
271	..No smoke to user	67	...With wrapper sealing
272	..Smoke to air ratio controlled	68	With heating means
273	..Smoking simulator	69	With adhesive supply or applier
274	PRODUCT OR DEVICE HAVING IDENTIFIABLE CONSTITUENT TO FLAVOR OR ENHANCE FLAVOR	70	..Tube filling type
		71	...With tip or mouthpiece applier or former
275	..Naturally occurring or synthetic duplicate	72	Plug inserting
276	..Organic compound	73	...With tube making
277	..Heterocyclic	74	...With hopper feed of tubes
278	...Containing nitrogen as hetro atom	75	...Mold with encircling wrapper tube
279	...Containing a sulphur atom	76	..With tip or mouthpiece applier or former
280	CIGAR OR CIGARETTE MAKING	77	..Molding or forming
281	..Including perforating	78	..Combined
282	..Including arranging, collecting, or delivering	79	...With tobacco treatment
283	..And packing	80	...With plural molding or forming
284	..With coating or printing	81.1	...With tobacco or bunch feed
285	..Including fingerlike member which alternately engages and releases product	82	...With bunch remover and/or transfer
		83.1	...With trimmer, perforator or slitter
286	..With cleaning away unwanted product component, e.g., gum or adhesive	84.1	..Continuous rod or ribbon former
287	..By pneumatic means	84.2	...With transverse compression
288	..By liquid means	84.3	...With pneumatic assist for tobacco movement
289	..By scraping, wiping, etc.	84.4	...With trimmer for rod or ribbon
27.1	..Including cooperating surfaces to induce rolling	85	..Molds
28	..Combined	86	...Plural
29	...With tip or mouthpiece applier or former	87	Rotary or endless carrier
30	With stationary smoother	88	..Tip or mouthpiece applying or forming
31	...With tobacco treatment	89	..End tucker, folder, crimper, smoother
32	...With subsequent wrapping or forming operations	90	...With adhesive supply or applier
33	...With wrapper cutter	91	...With cutter or trimmer
34	Continuous wrapper	92	...With heater and/or end punch
35	With adhesive supply or applier	93	...Rotating type
36	...With pre-cut wrapper feed and/or holder or smoother	94	..Plug attaching or inserting
37	...With adhesive supply or applier	95	..Sheet material tip
38	...With filler tobacco or bunch feeder	96	..Recovery of tobacco from cigarettes and cigars
39	...With plural feed	105	..Wrappers holders and carriers
40	...With bunch separator	106	..Cigar tagging or labeling
41	With bunch pre-compressor	107	..Bundling
42	Ribbon feed	108	..Tobacco feeding
43	Table mold	109.1	..With brushing, carding, or picking means
44	With hopper discharger	109.2	...With separator for tobacco dust, stems or foreign material
45	...With bunch pre-compressor	109.3	...With vibrating tamper or rake
46	...With end trimmer or completed article cutter	110	...With separator or suction device
47	..Apron type	111	PLUG OR COMPRESSED SHAPE MAKING
48	...With moving table	112	..Packing or bundling
49	Rotating or oscillating table	113	..Tagging or labeling
50	...With stationary table	114	...With tag or label making
51	With movable roll type member	115	..Turret type
52	Swinging roll support	116	..Continuous sheet type
53	Vertical axis	117	..With cutting
54	...Aprons	118	..With cutting
55	..Belt type	119	..Molds
56	..Roller type	290	TOBACCO TREATMENT
57	..Roller	291	..Puffing
57.5	..Drum and concave surfaces	292	..Including freeze drying
58	..Wrapping devices	293	..By chemical reaction
59	..Spirally wound continuous wrapper	294	..By radiant energy
60	..Longitudinally fed continuous wrapper	295	..By high frequency field
61.1	...With tip or mouthpiece applier or former	296	..By contact with hot gaseous medium
62	...With tobacco treatment	297	..Extraction of component, other than moisture, by contact with diverse medium
63	...With completed article cutter	298	..By organic solvent
64.1	With tobacco rod preshaper	299	..With electrical or radiant energy
64.2	With transverse or longitudinal compression	300	..With fluid or fluent material
65	...With completed article cutter	301	..Including means to create a vacuum
66.1	...With tobacco rod preshaper	302	..Including means to circulate fluid
		303	...And temperature or humidity control of fluid
		304	...Including means to convey tobacco
		305	..Within rotary drum-type apparatus
		306	..Including means to convey tobacco

	TOBACCO TREATMENT	212.2	Concentric ducts
	..With fluid or fluent material	213	Plural reversely extending passages
	..Including means to convey tobacco	214	Bowl detachable from neck cup
307	...Including expressing rolls	215.1	With valve in smoke path or
308	..Containing enzymes to cause		removable, external passage
	fermentation		closure
309	..Other than water, steam, or air	215.2	With filter
310	...Organic	215.3	Valve
311	..Including leaf disintegration	216	..Special smoke passages
312	..And separation of fibers of different	217	...Spiral passage
	character	218	...Plural reversely extending
313	..Leaf stemming	219	..Lined or coated
314	..With stem cleaning	220	...Bowl
315	..And straightening, smoothing,	221	..Reversible bowl
	flattening, or cleaning	222	..Bowl detachable from neck cup
316	...Booking	223	..With valve or external passage closure
317	...Stemmed by rotary or endless cutter	224	..Tobacco supports
318	..By fluid current	225	..Joints and connections
319	..By tearing	226	..Bowls
320	...Including transverse stem cutting	227	..Stems, bits or tips
321	...Card clothing type	228	...With sleeve or cap
322	..By cutting	229	...Outlet end shapes and orifices
323	...Stem die type	230	..Materials and compositions
324	..Leaf straightening, brushing,	231	..With ash receiver
	smoothing, rolling, corrugating, or	232	..Smoking device cleaner
	flattening with or without stem	233	..Tip cutter, perforator or slit
	crushing	234	..Igniter or scratching surface
325	..And cleaning	235.1	..Extinguisher
326	..Booking	236	...Liquid type
327	..Leaf associating or disassociating	237	...Movable extinguishing member
328	MAKING OR USING TOBACCO USERS' APPLIANCE	237.5	...Split tube type
329	TOBACCO USERS' APPLIANCE	238	..And devices for other use
330	..Device used for smoking	239	...Match holder
173	..Smoke washing type	240.1	..Cigar, cigarette, or smoking device
174	..Wind or ash guarding or ash receiving		rest or holder
175	...Cigar or cigarette holders	241	...With special receiver support
176	...Pipe covers	242	...With closure or covered compartment
177	...With tamper or tamper type	242.5	...With cigar or cigarette ejector,
178	..Combined or convertible		dumper, or advancer
179	...Plural smoking devices	242.6	...With grid or grille
180	...With storage means, feeder, and/or		smoking device cleaners
	plural bowl	243	..Combined or compound
181	Follower	244	..Fluid type
182	...With ejector	245	..Stem
183	...Tobacco support type	246	..Bowl
184.1	...With cleaner, stirrer, or tamper	247	..Pipe tampers
184.2	Pipe bowl type	248	..Cigar and cigarette end cutters,
184.3	With cleaner extending or operable		combined
	through external passage	249	..With igniter or scratching surface
185	...With igniter and/or match scratcher	250	..With receptacle or holder
186	...With support	250.1	...Dispensing type
187	..Cigar and cigarette holders	251	...Match receptacle
188	...With piercing device	252	..With perforator or slit
189	...Smoke conducting	253	..Cigar tip perforators or slitters
190	...With movable gripper or holder	254	..Pin or drill
191	..Tubes	255	..Punch
192	..Foldable or collapsible	256	..Cigar or cigarette extinguishers
193	..Base burner type	257	..Supports
194	..Heat exchanging and/or insulating	258	..Finger ring type
195	...Cooling air passages	259	..Staff type
196	...Spaced inner bowl	260	..Smoking device
197	...Plural reversely extending passages	331	SMOKE SEPARATOR OR TREATER
198.1	..Supplemental or substitute air inlet	332	..Having a polymer
198.2	...Adjustable air inlet type	333	..By electric, magnetic, or radioactive
199	..Longitudinally divided		action
200	..Smoke treating	334	..By chemical reaction, e.g.,
201	...Material separator and trap		ion-exchange, chelating, catalytic,
202	Filter and/or absorber		etc.
203	Absorber only (no filtering)	335	..By adding constituent to smoke stream
204	Lined or coated bowls or stems	336	..Air
205	Tobacco supports	337	..Having destructible, fusible, soluble,
206	With valve or external passage		or deformable container for
	closure		treatment material
207	Absorbent or particulate	338	..Having means to vary smoke flow rate
209	Spiral passage	339	..Interior surface causes particular flow
210	Serial checks or baffles		characteristic
211	Chamber enclosed tubes or nipples	340	..By use of specific filter mass
212.1	Smoke direction changing	341	..Plural diverse elements

- SMOKE SEPARATOR OR TREATER
..Plural diverse elements
342 ..Including particulate material
343 ..Plasticizer or adhesive coating
344 ..Occupying plural, separate, distinct
 zones
345 ..Including a cellulose ester or ether
346 ..With indicator or inspection means
347 TOBACCO OR TOBACCO SUBSTITUTE PRODUCT OR
 COMPONENT PART THEREOF
348 ..Pipe cartridges
349 ..With ash retainer or means to prevent
 or retard burning
350 ..With means to pierce or protect cigar
 end structure
351 ..With means to facilitate ignition
352 ..Compositions, e.g., smoking or chewing
 mixture or medium
353 ..Reconstituted tobacco
354 ...Material coated with tobacco dust or
 particle
355 ...Tobacco particles bonded by
 nontobacco adhesive
356 ...Having tobacco extracts or tobacco
 paste
357 ...Tobacco sheet formed from wet ground
 or wet beaten tobacco
358 ...Wrapper
359 ..Tobacco substitute, i.e., nontobacco
360 ..Cigar or cigarette
361 ..End structure
362 ...Coated or impregnated
363 ...Filler penetrating
364 ..Blank or filler
365 ..Wrapper or binder
366 ..Plug tobacco
367 ..Having specific shape
368 ..With identification, marking, label,
 or tag
369 METHOD OR APPARATUS FOR MAKING TOBACCO
 SUBSTITUTE
370 METHOD OR APPARATUS FOR MAKING
 RECONSTITUTED TOBACCO
371 ..Dust impingement
372 ..Slurry
373 ..Impregnation of web
374 ..Paper process
375 ..Extrusion
- CROSS-REFERENCE ART COLLECTIONS
- 900 LIQUIFIED GAS EMPLOYED IN PUFFING
 TOBACCO
901 ORGANIC LIQUID EMPLOYED IN PUFFING
 TOBACCO
902 INORGANIC CHEMICAL AGENTS EMPLOYED IN
 PUFFING TOBACCO
903 FIXING THE PRODUCT AFTER PUFFING
904 PNEUMATIC MEANS FOR SENSING CONDITION OR
 CHARACTERISTIC
905 RADIATION SOURCE FOR SENSING CONDITION
 OR CHARACTERISTIC
906 SENSING CONDITION OR CHARACTERISTIC OF
 CONTINUOUS TOBACCO ROD
907 EJECTION OR REJECTION OF FINISHED
 ARTICLE DUE TO DETECTED OR SENSED
 CONDITION
908 SENSING UNIQUE CHARACTERISTIC OR
 SPECIFIC CONDITION OF FINISHED PRODUCT
909 SENSING CONDITION IN FEED HOPPER FOR
 CIGAR OR CIGARETTE MAKING
910 SENSING OR DETECTING MALFUNCTION IN
 CIGAR OR CIGARETTE MAKER

DIGEST

DIG 1 Pipe literature

JUNE 1985

1	COMBINED MACHINES	10	..Stay applying
2	MISCELLANEOUS	11	...Clip joining
71 R	ARTICLE MAKING OR FORMING	12	...Wrapped loop
71 A	..Stain-gauge	13	...Short stay
71 B	..Vacuum tube grids	14	...Loop strand
71 C	..Coils	15	...Successively wrapped stay
71.5	..Electric lamp or electric space discharge device electrode	16	..Portable machines
71.6	..Filament mounting	17	...Mesh making
72	..Heddles	18	...Stay applying
73	..Bale ties	19	...Multiple strand
74	..Box straps	21	...Wrapped loop
75	..Bails	22	...Looped strand
76	..Ferrules	23	...Successively wrapped stay
77	..Hat wires	24	..Edge-strand binding
80	..Hooks	25	..Slat and wire
81	..Garment fastener type	26	..Slat cutting
81.5	..Garment hanger type	27	..Magazine
82	..Clips	28	..Dummy spacing
83	..Clothespins	29	..Movable carriage
84	..Belt lacings	30	..Strand twisting
85	..Cork fasteners	31	...Embedding
86	..Corkscrews	32	...Beaters
87	..Hairpins	33	...Spreaders
88	..Rings	34	..Strand coiling
89	..Spring setting	35	..Weavers
90	..Stays	36	..Twister heads
91	..Garment	37	..Portable machines
92	..Stud spirals	38	...Magazine
92.1	..Forms and frames	39	...Strand twisters
92.2	..Revoluble	40	...Slat adjustment
92.3	..Helix screwing through row of loops or openings	41	...Plumb adjustment
92.4	..Method	42	...Beaters
92.5	..Repeated interlacing with same row (e.g., cording mechanism)	43	...Vertically adjustable
92.6	..Simultaneous interlacing of plural helices	44	...Eccentric type
92.7	..Combined	45	...Wire crossers
92.8	..Loop row shifter	46	...Oscillatory
92.9	..Helix rotator travelling axially	47	...Strand coilers
92.93	..Grooved roller helix guides	48	...Weavers
92.94	..Helix embracing guides	49	...Tie-wire appliers
93 R	APPLYING WIRE	50	..Spacers
93 A	..Wire ties	51	..Clamps
93 B	..Bail-attaching	52	..Implements
93 C	..Wire bound boxes	53	..Magazines
93 D	..Clip clinching	54	..Revoluble head
93 E	..Wire pull bottle caps	55	..Slat attaching
93 F	..Handle attaching	56	..Tie-wire appliers
93.2	..Binder tightening and joining implements	57	BARBING
93.4	..Sleeve or clamp joining	58	..Barb-wire feeding
93.6	..Twisters	59	..Multiple strand
94	..Bottles and corks	60	..Four-point barbs
95	..Rotary bottle	61	...Strand crimping
97	..Card clothing	62	...Rotary coilers
100	..Comb making	63	..Strand crimping
150	SEAL APPLYING OR BAND FASTENING	64	..Rotary coilers
151	..By device having magazine for seals or fasteners	65	..Sheet metal
152	..By device having cutting edge	66	..Separate barbs
153	..By device having single throw lever	67	..Implements
154	..Including pivoted force multiplier between die and lever	69	..Revoluble head
3 R	FABRIC MAKING	70	KNOTTING
3 A	..Chain fabric	101	LOOP FORMING
3 AA	..Link and perforated plates	102	..Implements
3 B	..Rings	102.5	..Coil springs
3 BA	..Ring and spider plate	103	EYE FORMING
3 C	..Reinforced fabrics	104	CRIMPING
3 CA	..Coil spring mattresses	105	..Implements
4	..Rotary machines	106	FABRICS, WORKING
5	..All wire	107	..Stretchers
6	..Multiple strand	108	..Frame attaching
7	..Hexagonal mesh	109	...Bed bottoms
8	..Quadrangle mesh	110	JOINING WIRE
9	..Diamond mesh	111	..Electric welding
		112	..Machines
		113	..Interlocking eyes, making
		114	..Revoluble head
		115	..Tying dies
		116	..Implements
		117	..Twisters
		118	...Revoluble head
		119	

JUNE 1985

JOINING WIRE
 .Implements
 ..Twisters
120 ...Spread wire
121 ..Plier type
122 ..Revoluble head
123 IMPLEMENTS
123.5 .Stretchers
123.6 ..Cutting feature
124 ..Coiling
139 WIRE CUTTING AND STRAIGHTENING
140 ..Predetermined lengths
147 WIRE STRAIGHTENING
149 WIRE TWISTING

CLASS 144 WOODWORKING

JUNE 1985

329	PROCESS	62	..Emptying
330	..Repairing or reconstructing	63	..Filling
331	..Bowling pin	64	...Hopper feed
332	..Plywood, veneer or board	65	..Dipping frames
333	..Rattan or bamboo working	66	..Splint feed mechanism
334	..Stump removing	207	OSIER PEELERS
335	..Timber harvesting or processing	208 R	ROSSING BARK
336	..Tree felling	208 A	..Disk knife
337	...And chipping	208 B	..Drums and tanks
338	...Including delimbing and cutting trunk to length	208 C	..Hand tools
339	...By shearing	208 D	..Hydraulic
340	..Debarking	208 E	..Hollow head cutter
341	...Mechanical (e.g., frictional, impacting, cutting)	208 F	..Simultaneously rotating and advancing log
342	Including pretreatment	208 G	..Non-traveling log
343	..Delimbing	208 H	..Step-by-step
344	..Securing	208 J	..Chain, cable, flail, hammer or percussive tool
345	..And cutting or shaping	208 K	..Tree climber
346	...Surface bonding	2 R	SPECIAL-WORK MACHINES
347	Of interengaging work parts (e.g., dovetail)	2 A	..Core and panel machines
348	With heat application	2 B	..Box hinging
349	Bending concurrent or subsequent to bonding	2 C	..Box making
350	Cutting or shaping subsequent to bonding	2 D	..Block surfacing
351	Followed by additional bonding	2 E	..Cork cutting and making
352	With pressure application	2 F	..Shuttles and bobbins
353	...By separate mechanical fastener	2 G	..Ten pins
354	...Interengaging work parts	2 H	..Bowling balls
355	...Shaping by cutting	2 J	..Timber punching
356	...Including monitoring of operation	2 K	...Perforating and expanding
357	..By means which determines dimension of work	2 L	..Ring joints
358	..Embossing or imprinting	2 M	..Patch cutting
359	..Mechanical cutting or shaping	2 N	..Stump removing
360	..With combined steps of shaping by cutting and forming	2 P	..Ratan
361	..Fiber working or reorientation	2 Q	..Ladder
362	...Roller movement parallel to grain	2 S	..Racks and grids
363	..Cutting	2 T	..Stagging
364	...With heating, cooling, or fluid application	2 UA	..Oil cake trimmer
365	...Turning, boring or drilling	2 V	..Wooden shoes and lasts
366	...Including splitting	2 W	..Coat hanger
367	...Plural discrete diverse cutting operations	2 XA	..Golf clubs
368	Including grooving	2 Y	..Lifters
369	Including slicing, slitting, chipping, or planing	2 Z	..De-limbing
370	Chipping	2 AA	..De-knotting
371	...Routing or grooving	3 R	..Combined
372	...Using template or pattern	3 A	...Electrical sequence control
373	..Chipping or planing	3 B	...Electrical, hydraulic sequence control
374	Using ganged cutting discs	3 C	...Hydraulic sequence control
375	...Using cylindrical tool	3 D	...Timber cutting and handling
376	...Longitudinal sawing	3 E	...Assembly-line type
377	Longitudinally tapered work or product	3 F	...Pivoted traveling
378	Log or cant sawing	3 G	...Wheels and hubs
379	...Transverse sawing	3 H	...Gaining and boring ties
380	..With heating, cooling or fluid application	3 J	...Tract car
381	..Bending	3 K	...Spitting
50	MATCH MAKING	3 L	...Box making
51	..Wax and paper	3 M	...Cord and strip wood connector
52	..Cutting, framing, and dipping	3 N	...Printing or marking
53	..Die punches	3 P	...Slabbing-off, log squaring
54	..Cutting and framing	3 Q	...Mechanical sequence
55	..Die punches	3 S	...Mechanical sequence by tape
56	...Fixed	5	..Blind and sash cutting
57	..Cutting and coiling	6	...Relishing
58	..Framing and dipping	7	..Box blank
59	..Coiling	8	..Chair-round tenoning and sawing
60	..Dipping	9	..Clothespin
61	..Box filling	10	..Conveyor flight
	..Dipping frames	11	..Handle
		12	..Pin
		13	..Shingle
		14	..Spool
		15	..Wheel tenoning and boring
		16	..Wheel hub
		18	..Wheel-spoke tenoning and sawing
		19	..Window-stile-pocket cutting
		4	..Circular section
			..Single or combined

163

BEST COPY AVAILABLE

	SPECIAL-WORK MACHINES	82	.Rotary cutter
	..Single or combined	83	..Portable
20	..Disk cutting and boring	84	.Work supports
21	..Disk cutting	85	DOVETAILING
23	...Rotary tubular cutter	86	.Consecutive cutters
24	...Sweep cutter	87	.Frusto-conical bit
25	..Box hooping	88	.Inclined chisel
26	..Comb-teeth cutting	89	.Inclined rotary disk
27	..Hinge-seat cutting	90 R	MATCHING
29	..Piano-hammer felting	90 A	..Matching cutters
28	..Pencil-wood making	91	.End
28.1	..Pencil sharpening	92	BORING
28.11	...Hand-manipulable	93 R	.Special work
28.2	...Including elongated work holder or guide for edge-beveling	93 A	...Lasts
28.3	...Movable tool	96	.Brush
28.4	Work-actuated tool drive	97	..Tilting work holder
28.5	Work-controlled switch for tool drive		.Wheel hub
28.6	Rotatable or revolvable	98	..Axial
28.7	Planetary	99	...Stationary bitstock
28.71	Plural tools	100	...Stationary work
28.72	Including orbital or electric motor drive	103	Inclined bitstock
28.8	Work holder or guide also rotary	104	.Swinging
28.9	Rotary work holder or guide	106	.Portable
30	..Pin pointing		..Hand
33	..Tray making	108	...Angularly adjustable
34 R	..Tree felling		.Long work
34 A	Tree pullers and pushers	114 R	..Hand-operated step feed
34 B	Tree felling methods	114 A	PLANERS
34 C	Anti-split clamps	115	.Miscellaneous
34 D	Burning and charring		...Sharpeners
34 E	Shears		.Scrapers
34 F	Single blade and pass	124	.Beveling
1 R	COMBINED MACHINES		..Lateral
1 A	..Turret tools	125	..Longitudinal
1 B	..Coaxial tools, different work levels	126	...Inclined work pocket
1 C	..Tippable frame	127 R	...Shifting cutter
1 D	..Combined bandsaw	127 A	...Shifting work support
1 E	..Hand-held		Shingle planer
1 F	...Attachments to hand-held	116	.Rotary cutter
1 G	...Different motor positions	117 R	..Cylinder
1 H	..Levels on machine	117 A	...Double surfacers
1 J	..Flexible shaft drive	117 B	..Cylinder
35 R	.Boring and sawing	117 C	...Inclined
35 A	...Attachments for converting one tool to other	118	Edge trimmer
36	.Planing and matching	131	...Traveling
37	.Planing, matching, and dividing	118	...Bearings
38	.Planing and polishing	119 R	..Disk
39	.Planing and sawing	119 A	...Traveling
40	.Riving and shaving	120	Bowling alleys
41	.Shaping and dividing	132	.Stationary cutter
42	.Slicing and scoring	121	..Bit adjustments
43	.Slicing and shaving	122	.Reciprocating cutter
44	..Converging knives	123	..Lateral
46	.Turning and boring	128	.Endless cutter carrier
47	.Turning and polishing	129	.Endless bed
48	.Turning and sawing	130	.Bed adjustments
49	MISCELLANEOUS SINGLE-OPERATION MACHINES MORTISING	130	.Cutter adjustments
67	..Multiple chisel	133 R	GAINING
68	..Portable	133 A	..Tie gaining, ties (skepters) pass through machine
69	.Auger cutter	133 B	..Traveling on railway track
70	..Portable		SHAPING
71	..Automatic step feed	134 R	.Miscellaneous
72	.Chain cutter	134 A	..Vertical spindle
73	..Portable	134 B	...Overhanging
	.Chisel	134 C	...Overhanging, horizontal swinging cutter
74	..Boring and mortising	134 D	...Hand tools
75	.Chisel	134 E	...Sabot and shoe making
76	..Portable	134 F	...Heel forming
77	.Chisel reversers	155	.Box trimming
78	.Hollow chisel and bit	136 R	.Grooving
79	..Portable	136 A	...Core boy
80	.Oscillating chisel	136 B	...Stringer
81	..Portable	136 C	...Hand tool
		136 D	...Hand holds
		136 E	...Battery spacers
		136 F	...Umbrella sticks

JUNE 1985

	SHAPING		
	..Grooving	190	..Plunger and fixed knife
136 G	...Corner grooves	191	..Receiving and handling devices
136 H	...Log or poles	192	SPLITTING AND BUNDLING
136 J	...Gunstock	193 R	SPLITTING
	..Pattern	193 A	..Fluid pressure wedge or anvil
137	..Miscellaneous	193 B	..Drop type
138	..Polygonal forms, indexed work	193 C	..Hand tools
139	..Rotating table, shifting cutter	193 D	..Wedges to be driven
140	..Gear-guided cutter	193 E	..Wedges, stationary
141	..Crank-guided cutter	193 F	..Anvils, chopping or splitting blocks
	..Cam	193 G	..Splitting guns
142	...Cutter guiding	193 H	..Hand operated fixed splitting machines
143	...Work guiding	193 J	..Products are tapered or wedges shaped
	..Templet	193 K	..With adjustable work support
144 R	...Cutter guiding	194	..Self-feeding
144 A	Tool support swingable in	195	..Roller and belt
	horizontal	196	PUNCHING CUTTERS
144 B	Propellers	197	..Fixed die
144 C	Violins	198 R	TENONING
144 D	Oars	198 A	..Attachments to table saws
144.5 R	Templets	199	..Blind slat
144.5 GT	Guide track	200	..Rotary cutters
145 R	...Work guiding	201	..Rotary gaining cutters
145 A	Vertical spindle cutter	202	..Chisel pair
145 B	Shaping lasts	203	..Rotary gaining cutters
145 C	Vertical spindle, anti-friction	204	..Multiple tenon
	collar	205	TENON TURNING
146	..Oscillating knife	206	..Wheel spoke
147	..Reciprocating knife	209 R	VENEER LATHES
148	..Reversible cutter	209 A	..Log loading and/or centering
149	..Pattern knife, swinging frame	209 B	..Eccentric curved cuts
150	..Rotary cutter, end thrust	209 C	..Diagonal cuts and curved cutting edge
151	..Universally jointed cutter shaft	210	..Convertible
152	..Curved-work guide	211	..Inclined knives
153	..Curved-bar work support	212	..Knives and knife blocks
154	..Rotary work carrier	213	..Presser bars and rolls
	SHAVING	214	..Stay logs
155	..Fixed knife	215	..Strip-cutting attachments
156	..Circular knife block	216	MITER CUTTERS
157	..Drum feed	217	..Angle knife
158	..Roller feed		CUTTERS
159	..Knife pair	218	..Rotary
160	..Gripper	219	..Miscellaneous
161	..Roller feed	220	..End thrust
162 R	SLICERS		..Frusto-conical
162 A	..Bottom cutting		..Cylindrical
162 B	..Tapered products	221	...Spiral bit
163	..Reslicers	230	...Slotted bit seat
	..Strip cutting		..Saw
164	..Converging knives		...Double
165	...Lathe feed	222	...Intermediate cutter
166	..Lathe feed	238	...Wobble
167	..Arc cut	239	...Distorted
	..Beveling	223	...Single
168	..Alternate end feed		...Side cutter
169	..Shifting, knife guide		..Polygonal
170	..Tilting gauge	224	...T-slot bit clamp
171	..Tilting table	225	...Plane bit seat
172	..Cylinder	226	...Convex bit seat
173	..Grooving	227	...Concave bit seat
174	..Radial knife		..Radial arms
175	..Fixed knife	228	...Plane bit seat
176	..Rotary disk	229	...Slotted bit seat
	..Stay log		..Disk
177	..Oscillating		...Multiple clamping disks
178	..Reciprocating	231	...Tangential bit
179	..Screw feed	232	...Pivoted bit
180	..Hopper feed	233	...Shank bit
181	..Roller feed	234	...Eccentric segmental bit
182	RIVING		...Side attached bit
183	..Beveling	235	...Edge cutting
184	..Fixed knife		...Multiple
185	SLIVERING	236	...Pattern
186	..Scoring plane	237	...Gang
187	..Endless belt	240	..Solid
188	..Rotary	241	...Bits
189	..Gang saw	251 R	CUTTER GUARDS
		251 A	..Vertical spindle

251 B	CUTTER GUARDS	278 B	..Lasts, heels
252 R	..Laterally urged	284	CORK AND BUNG PRESSES
252 A	CUTTER HOODS AND DUST CONVEYERS	285	WORKBENCHES AND TOOL CHESTS COMBINED
242 R	..With sifter, sorter, or separator	286 R	WORKBENCHES
242 A	FEED OR PRESSER MECHANISM	286 A	..Special shapes and structures
242 A	..Non-feeding presser means	287	.Adjustable stock rest
242 B	...Feet	288.5	LATH HOLDERS
242 C	...Rolls	306	BENCH DOGS
242 D	...Chains	307	.Clamping
242 E	...Lateral	308	.Removable
242 F	...Reverse feed starters		
242 G	...Turnovers		
242 H	...Lifters		
242 J	...Four motion feet		
242 K	...Fluid pressure drive		
242 L	...Reverse feed		
242 M	...L-feeds		
243	.Presser bars and chip breakers		
244	..Sectional		
245 R	.Blank feeders		
245 A	...Endless		
245 B	...With clamp		
245 C	...Stackers		
245 D	...Intermittent feed chain drive		
245 E	...Pusher with retractable dog		
245 F	...Feed from top of stack		
	..Rolls		
	..Feed		
246 R	...Miscellaneous		
246 A	Resilient feed rolls		
246 B	Oblique means urge work laterally		
246 C	Special shaped rolls		
246 D	Rolls feed in direction of cut		
246 E	On overhanging arm		
246 F	Work centering and feeding		
246 G	Feelers and pre-sensing devices		
247	...Spring pressed		
248	...Weighted		
249 R	..Presser		
249 A	Fluid pressure raised and/or lowered		
249 B	Laterally acting		
250 R	..Sectional		
250 A	Multiple parts rigid assembly		
253 R	WORK GUIDES		
253 A	..Knife edge		
253 B	..Side or edge eveners		
253 C	..Centering		
253 D	..Roll or collar coaxial with cutter		
253 E	..Work held by corner and/or diagonal work		
253 F	..Work urged lateral		
253 G	..Adjustable inclined work-engaging face		
253 H	..Simultaneous adjustments along length		
253 J	..Vertical spindle		
	WOOD BENDING		
254	.Bending and drying		
255	.Bending rollers		
256.1	.Wood bending press		
256.2	..End compressor		
256.3	..Having opposed contoured rigid platens		
256.4	...Three contoured rigid platens		
258	.Hoop gauging		
	..Former		
259	..Fixed		
260	...Collapsible		
261	...End thrust		
262	...Radial arm and roller		
263	...Strap and windlass		
264	...Strap and lever		
265	...Strap and screw		
266	...Strap		
267	..Pivotal		
268	...Coiling		
269	.Clamps		
270	.Bends		
271	.Steaming		
278 R	MACHINE WORK CLAMPS		
278 A	..Vacuum operated		

JUNE 1985

- | | | | |
|--------|---|--------|--|
| 1 | MISCELLANEOUS | 9.6 | ..Nicking or transverse cutting of rods or tubes |
| 1.5 | PROCESSES FOR PRODUCING BARRIER LAYER STOCK MATERIAL | 11.5 R | ..Working and heat treatment |
| 171 | ..Incorporating an impurity during forming of barrier layer material | 11.5 F | ...Refractory metal |
| 172 | ..Utilizing seed crystal for drawing barrier layer material from melt | 11.5 A | ...Aluminum |
| 173 | ...With preferential segregating of impurities during drawing | 11.5 C | ...Copper |
| 174 | ..Vapor depositing to form a layer | 11.5 M | ...Magnesium |
| 175 | ...Epitaxial depositing | 11.5 N | ...Nickel or cobalt |
| 176 | ..Impurity reorientation by recrystallizing | 11.5 P | ...Powder |
| 177 | ..By alloying of an impurity with a substrate layer | 11.5 Q | ...Composites |
| 178 | ..With post-alloy diffusing | 12 R | ..Iron and its alloys |
| 179 | ..With localized area alloying control | 12 A | For magnetic/electric use |
| 180 | ..Vapor depositing of an impurity | 12 B | Bar, cable, rod or wire |
| 181 | ..Including plural heating or cooling stages | 12 E | Stainless steel |
| 182 | ..Utilizing flux | 12 EA | Ferritic |
| 183 | ..By passing electric current through material | 12 C | For deep-drawing/enameling use |
| 184 | ..With appreciation of pressure to material during alloying | 12 D | For tin-plating, galvanizing or black plate |
| 185 | ..With named impurities | 12 F | Low alloy (0.4% C, 10% total non-Fe) high-strength/toughness, e.g., good Charpy impact |
| 186 | ..By diffusing impurity into a substrate | 12.1 | ...With special compositions |
| 187 | ..With pretreating of substrate prior to applying impurity or localized area diffusing | 12.3 | ...With aging |
| 188 | ..Contacting substrate with solid impurity and diffusing the impurity while in contact with substrate | 12.4 | ...With quench hardening |
| 189 | ..Vapor phase diffusing impurity into solid substrate | 12.7 R | ..Including age hardening |
| 190 | ..With plurality of named impurities | 12.7 A | Aluminum |
| 191 | ..By out-diffusing impurity from substrate | 12.7 B | Refractory |
| 100 | MAGNETIC MATERIALS | 12.7 C | Copper |
| 101 | ..Permanent magnet | 12.7 N | Nickel or cobalt |
| 102 | ..Age hardening | 12.9 | ..High frequency vibration |
| 103 | ..Treatment in a magnetic field | 13 | ..Heat treatment |
| 104 | ..Dust cores | 13.1 | ..With special compositions |
| 105 | ..Particulate material | 13.2 | ...Copper and its alloys |
| 108 | ..Treatment in a magnetic field | 14 | ...Iron and its alloys |
| 110 | ..Silicon steel | 15 | Fused |
| 111 | ..Working | 15.5 | Case hardening |
| 112 | ..Heat treatment | 16 | Gaseous |
| 113 | ...With special compositions | 16.5 | Case hardening with a gas containing carbon |
| 120 | ..Working | 16.6 | Case hardening with a gas containing nitrogen |
| 121 | ..Heat treatment | 16.7 | Neutral atmosphere |
| 122 | ..With special compositions | 18 | Liquid |
| 2 | CASTING, WORKING AND HEAT TREATMENT | 19 | Carbonaceous |
| 3 | CASTING AND HEAT TREATMENT | 20 | Fused |
| 4 | SOLID METAL | 20.3 | ...Gaseous |
| 6 | ..Coating | 20.6 | ...Liquid |
| 6.1 | ..Utilizing organic dyestuff | 125 | ..Chilling to subambient temperature |
| 6.11 | ..Fused bath | 126.1 | ..Particulate |
| 6.14 R | ..Liquid bath | 127 | ..Composite |
| 6.14 A | Oxalic acid or salt | 128 | ..With measuring, testing or sensing |
| 6.15 R | ...Phosphorus-containing | 129 | ...Magnetic or electrical property |
| 6.15 Z | Zinc-containing | 130 | ..Shape or size alteration |
| 6.16 | ...Chromium-containing | 131 | ..With pressure or restraining force |
| 6.17 | Sulfur-, selenium- or tellurium-containing | 132 | ..Actinide or trans-actinide metal or alloy |
| 6.2 | ...Chromium-containing | 133 | ..Group IVA, VA or VIA metal or metal alloys |
| 6.21 | Sulfur-, selenium- or tellurium-containing | 134 | ..Iron or its alloys |
| 6.24 | ...Sulfur-, selenium- or tellurium-containing | 135 | ...Stainless steel |
| 6.27 | ...Aluminum or magnesium or their alloys | 136 | ...Austenitic |
| 6.3 | ..Gaseous or vaporous medium | 137 | ...Austenitic manganese (Hadfield) steel |
| 6.31 | ...Copper or its alloys | 138 | ...Cast iron |
| 6.35 | ...Iron or its alloys | 139 | Spherulitic |
| 9 R | ..Cutting by heat | 140 | Pre-malleablizing treatment |
| 9 C | ...With adjuvant powder | 141 | Hardening treatment |
| 9.5 | ..Desurfacing or gouging | 142 | ...Aging |
| | | 143 | ...Quench hardening |
| | | 144 | With preliminary heating |
| | | 145 | Localized or zone treatment |
| | | 146 | Work or nonuniform dimension |
| | | 147 | Serrated work surface, e.g., saw blade, gear teeth, threads, etc. |
| | | 148 | Heterogeneous treatment |
| | | 149 | With heat barrier |
| | | 150 | Electric heating with work as current conductor |
| | | 151 | With flame heating |

JUNE 1985

SOLID METAL	442	..Containing over 50 per cent metal, but no base metal
..Heat treatment		
..Iron or its alloys	33	..Barrier layer material, P-N type
...Quench hardening	33.1	...With contiguous layer doped to degeneracy
....Localized or zone treatment		
152 Surface treatment only	33.2	...With recess, void, dislocation, grain boundaries or channel openings
153 Work handling		
154 ...Electric heating with work as current conductor	33.3	...With non-semiconductive coating thereon
155 ...Work handling	33.4	...With contiguous layers of different semiconductive material
156 Running length work		
157 ...Special application of treating medium	33.5	...Having at least three contiguous layers of semiconductive material
158 ..Age hardening	33.6	Including an alloy layer having named impurities
159 ...Aluminum alloys		
160 ...Copper alloys	35	.Cast iron
161 ...Magnesium alloys	36	.Carbon steels; low alloys steels (total alloys content, 10% maximum)
162 ...Nickel alloys		
22 ..Compositions	37	.Stainless steel
23 ..Fluxing	38	..Austenitic
24 ...Metallic	39	.Having portions or differing metallurgical properties or characteristics
25 ...Oleaginous		
26 ...Inorganic		
27 ..Heat treating		
28 ...Liquid		
29 Oleaginous		
30 ...Carbonaceous		
31 STOCK		
31.5 ..Coated		
31.55 ..Magnetic		
31.57 ..Permanent magnet		
400 ..Nonferrous		
401 ..Radioactive		
402 ..Mechanical memory		
403 ..Amorphous, i.e., glassy		
404 ..Directionally solidified		
405 ..Age or precipitation hardened or strengthened		
406 ...Magnesium base		
407 ...Refractory metal base		
408 ...Cobalt base		
409 ...Nickel base		
410 Chromium containing		
411 ...Copper base		
412 Tin containing		
413 Zinc containing		
414 Nickel containing		
415 ...Aluminum base		
416 ...Copper containing		
417 Magnesium containing		
418 Vanadium, niobium or tantalum containing		
419 ...Containing over 50 per cent metal, but no base metal		
420 ..Magnesium base		
421 ..Titanium, zirconium, or hafnium base		
422 ..Vanadium, niobium, or tantalum base		
423 ..Chromium, molybdenum, or tungsten base		
424 ..Manganese base		
425 ..Cobalt base		
426 ..Nickel base		
427 ...Chromium containing		
428 Aluminum containing		
429 ...Aluminum containing		
430 ..Noble metal base		
431 ...Silver base containing in situ formed oxides		
432 ..Copper base		
433 ...Tin containing		
434 ...Zinc containing		
435 ...Nickel containing		
436 ...Aluminum containing		
437 ...Aluminum base		
438 ...Copper containing		
439 Magnesium containing		
440 ...Magnesium containing		
441 ..Zinc base		
		DIGESTS
	DIG 1	AMORPHOUS SEMICONDUCTOR
	DIG 2	AMPHOTERIC DOPING
	DIG 3	ANNEAL
	DIG 4	ANNEALING, INCOHERENT LIGHT
	DIG 5	ANTIMONIDES OF GALLIUM OR INDIUM
	DIG 6	APPARATUS
	DIG 7	AUTODOPING
	DIG 8	BI-LEVEL FABRICATION
	DIG 9	BI-MOS
	DIG 10	BIPOLAR TRANSISTORS-ION IMPLANTATION
	DIG 11	BIPOLAR TRANSISTORS
	DIG 12	BONDING E.G., ELECTROSTATIC FOR STRAIN GAUGES
	DIG 13	BREAKDOWN VOLTAGE
	DIG 14	CAPACITOR
	DIG 15	CAPPING LAYER
	DIG 16	CATALYST
	DIG 17	CLEAN SURFACES
	DIG 18	COMPENSATION DOPING
	DIG 19	CONTACTS OF SILICIDES
	DIG 20	CONTACTS, SPECIAL
	DIG 21	CONTINUOUS PROCESS
	DIG 22	CONTROLLED ATMOSPHERE
	DIG 23	DEEP LEVEL DOPANTS
	DIG 24	DEFECT CONTROL-GETTERING AND ANNEALING
	DIG 25	DEPOSITION MULTI-STEP
	DIG 26	DEPOSITION THRU HOLE IN MASK
	DIG 27	DICHLOROSILANE
	DIG 28	DICING
	DIG 29	DIFFERENTIAL CRYSTAL GROWTH RATES
	DIG 30	DIFFUSION
	DIG 31	DIFFUSION AT AN EDGE
	DIG 32	DIFFUSION LENGTH
	DIG 33	DIFFUSION OF ALUMINUM
	DIG 34	DIFFUSION OF BORON OR SILICON
	DIG 35	DIFFUSION THRU A LAYER
	DIG 36	DIFFUSION, NONSELECTIVE
	DIG 37	DIFFUSION-DEPOSITION
	DIG 38	DIFFUSIONS-STAGED
	DIG 39	DISPLACE P-N JUNCTION
	DIG 40	DOPANTS, SPECIAL
	DIG 41	DOPING CONTROL IN CRYSTAL GROWTH
	DIG 42	DOPING, GRADED, FOR TAPERED ETCHING
	DIG 43	DUAL DIELECTRIC
	DIG 44	EDGE DIFFUSION UNDER MASK
	DIG 45	ELECTRIC FIELD
	DIG 46	ELECTRON BEAM TREATMENT OF DEVICES
	DIG 47	EMITTER DIP
	DIG 48	ENERGY BEAM ASSISTED EPI GROWTH
	DIG 49	EQUIVALENCE AND OPTIONS
	DIG 50	ETCH AND REFILL
	DIG 51	ETCHING

JUNE 1985

- DIG 52 FACE TO FACE DEPOSITION
DIG 53 FIELD EFFECT TRANSISTORS FETS
DIG 54 FLAT SHEETS-SUBSTRATES
DIG 55 FUSE
DIG 56 GALLIUM ARSENIDE
DIG 57 GAS FLOW CONTROL
DIG 58 GE GERMANIUM
DIG 59 GERMANIUM ON SILICON OR GE-SI ON III-V
DIG 60 GETTERING
DIG 61 GETTERING-ARMORPHOUS LAYERS
DIG 62 GOLD DIFFUSION
DIG 63 GP II-IV-VI COMPOUNDS
DIG 64 GP II-VI COMPOUNDS
DIG 65 GP III-V (GENERIC) COMPOUNDS-PROCESSING
DIG 66 GP III-V LIQUID PHASE EPITAXY
DIG 67 GRADED ENERGY GAP
DIG 68 GRAPHITE MASKING
DIG 69 GREEN SHEETS
DIG 70 GUARD RINGS AND CMOS
DIG 71 HEATING, SELECTIVE
DIG 72 HETEROJUNCTIONS
DIG 73 HOLLOW BODY
DIG 74 HORIZONTAL MELT SOLIDIFICATION
DIG 75 IMIDE RESISTS
DIG 76 IMPLANT
DIG 77 IMPLANTATION OF SILICON ON SAPPHIRE
DIG 78 IMPURITY REDISTRIBUTION BY OXIDATION
DIG 79 INERT CARRIER GAS
DIG 80 INFRA-RED
DIG 81 INSULATORS
DIG 82 ION IMPLANTATION FETS/COMS
DIG 83 ION IMPLANTATION, GENERAL
DIG 84 ION IMPLANTATION OF COMPOUND DEVICES
DIG 85 ISOLATED-INTEGRATED
DIG 86 ISOLATED ZONES
DIG 87 I2L INTEGRATED INJECTION LOGIC
DIG 88 J-FET (JUNCTION FIELD EFFECT TRANSISTOR)
DIG 89 JOSEPHSON DEVICES
DIG 90 LASER ANNEAL
DIG 91 LASER BEAM PROCESSING OF FETS
DIG 92 LASER BEAM PROCESSING-DIODES OR TRANSISTOR
DIG 93 LASER BEAM TREATMENT IN GENERAL
DIG 94 LASER BEAM TREATMENT OF COMPOUND DEVICES
DIG 95 LASER DEVICES
DIG 96 LATERAL TRANSISTOR
DIG 97 LATTICE STRAIN AND DEFECTS
DIG 98 LAYER CONVERSION
DIG 99 LED, MULTICOLOR
DIG 100 LIFT-OFF MASKING
DIG 101 LIQUID PHASE EPITAXY LPE
DIG 102 MASK ALIGNMENT
DIG 103 MASK, DUAL FUNCTION E.G., DIFFUSION AND OXIDATION
DIG 104 MASK, MOVABLE
DIG 105 MASKS, METAL
DIG 106 MASKS, SPECIAL
DIG 107 MELT
DIG 108 MELT BACK
DIG 109 MEMORY DEVICES
DIG 110 METAL-ORGANIC CVD (RUEHRWEIN TYPE)
DIG 111 NARROW MASKING
DIG 112 NITRIDATION, DIRECT, OF SILICON
DIG 113 NITRIDES OF BORON OR ALUMINUM OR GALLIUM
DIG 114 NITRIDES OF SILICON
DIG 115 ORIENTATION
DIG 116 OXIDATION, DIFFERENTIAL
DIG 117 OXIDATION, SELECTIVE
DIG 118 OXIDE FILMS
DIG 119 PHOSPHIDES OF GALLIUM OR INDIUM
DIG 120 PHOTOCATHODES-CS COATED AND SOLAR CELL
DIG 121 PLASTIC TEMPERATURE
DIG 122 POLYCRYSTALLINE
DIG 123 POLYCRYSTALLINE DIFFUSE ANNEAL
DIG 124 POLYCRYSTALLINE EMITTER
DIG 125 POLYCRYSTALLINE PASSIVATION
DIG 126 POWER FETS
DIG 127 PROCESS INDUCED DEFECTS
DIG 128 PROTON BOMBARDMENT OF SILICON
DIG 129 PULSE DOPING
DIG 130 PURIFICATION
DIG 131 REACTIVE ION ETCHING RIE
DIG 132 RECOIL IMPLANTATION
DIG 133 REFLOW OXIDES AND GLASSES
DIG 134 REMELT
DIG 135 REMOVAL OF SUBSTRATE
DIG 136 RESISTORS
DIG 137 RESISTS
DIG 138 ROUGHENED SURFACE
DIG 139 SCHOTTKY BARRIER
DIG 140 SCHOTTKY BARRIER CONTACTS
DIG 141 SELF-ALIGNMENT COAT GATE
DIG 142 SEMICONDUCTOR-METAL-SEMICONDUCTOR
DIG 143 SHADOW MASKING
DIG 144 SHALLOW DIFFUSION
DIG 145 SHAPED JUNCTIONS
DIG 146 SHEET RESISTANCE (DOPANT PARAMETERS)
DIG 147 SILICIDES
DIG 148 SILICON CARBIDE
DIG 149 SILICON ON III-V
DIG 150 SILICON ON SAPPHIRE SOS
DIG 151 SIMULTANEOUS DIFFUSION
DIG 152 SINGLE CRYSTAL ON AMORPHOUS SUBSTRATE
DIG 153 SOLAR CELLS-IMPLANTATIONS-LASER BEAM
DIG 154 SOLID PHASE EPITAXY
DIG 155 SOLID SOLUBILITY
DIG 156 SONOS
DIG 157 SPECIAL DIFFUSION AND PROFILES
DIG 158 SPUTTERING
DIG 159 STRAIN GAUGES
DIG 160 SUPERLATTICE
DIG 161 TAPERED EDGES
DIG 162 TESTING STEPS
DIG 163 THICK-THIN OXIDES
DIG 164 THREE DIMENSIONAL PROCESSING
DIG 165 TRANSMUTATION DOPING
DIG 166 TRAVELING SOLVENT METHOD
DIG 167 TWO DIFFUSIONS IN ONE HOLE
DIG 168 V-GROOVES
DIG 169 VACUUM DEPOSITION (INCLUDES MOLECULAR BEAM EPITAXY)
DIG 170 VAPOR-LIQUID-SOLID
DIG 171 VARISTOR
DIG 172 VIDICONS
DIG 173 WASHED EMITTER
DIG 174 ZENER DIODES

169

BEST COPY AVAILABLE

JUNE 1985

1	SPRING WHEELS	79	Reversely curved
2	..With lubrication	80	...End secured
3	..Spring enclosure	81	Single end
4	..Cylinder and piston	82	With separate annulus guide
5	..Deformable ground engaging part	83	Combined drive
6	..With plural spring types	84	Oppositely curved pairs
7	..With rubber spring	85	Reversely curved springs
8	..With pneumatic spring	86	Arcuate
9	...Annular	87	..Coil spring
10	With air tanks	88	...Link connected
11	..With leaf spring	89	...Variously arranged
12	...End secured	90	Tangential and radial
13	..With coil spring	91	...Diagonal
14	...Radial	92	...Circumferential
15	Cylinder and piston supported	93	...Tangential
16	Encircled rod supported	94	...Transverse
17	..Spring encircling rigid annulus	95	Center secured
18	..With nonresilient overload stop	96	Concentric with wheel axis
19	..Convertible to rigid wheel	97	...Radial
20	..With flexible annular support	98	Tandem, interposed bearing
21	..Lateral thrust or tension	99	Telescoping cylinder supported
22	...Combined spring and friction	100	Cylinder and piston supported
23	Coil springs	101	With separate drive
24	Double thrust	102	Double acting
25	With coil springs	103	Encircled rod supported
26	Rod encircling	104	With independent annulus guide and drive
27	...With balls		With separate annulus guide
28	..Combined spring and friction	105	Combined drive
29	..With plural spring types	106	Spring
30	...Rubber and pneumatic	107	Links
31	...Rubber and leaf	108	Radial
32	...Rubber and coil	109	Studs or lugs
33	...Annular rubber	110	Through bolts
34	...Pneumatic and leaf	111	With separate drive
35	...Pneumatic and coil	112	
36	...Annular pneumatic	151	TIRES, RESILIENT
37	...Leaf and coil	152	..Emergency
38	...Center secured leaf	152.1	..With electrical conducting means
39	End secured leaf	153	..With cooling devices
40	..Rubber spring	154	..With splash guards
41	...In shear	154.1	..With balancing feature
42	...Cylindrical	154.2	..With wear indicating feature
43	...Transverse	155	..Cushion and pneumatic combined
44	...Blocks or balls	156	..Metallic spring cushion
45	With drive	157	..Enclosed cushion
46	With separate annulus guide	158	..Internal buffers
47	...Annular	159	..Superimposed
48	Rigid annulus enclosing	160	..Plungers
49	Plural	161	...Edge-secured cushion
50	With separate annulus guide	162	...Guide flanges
51	Combined drive	163	...Radial stops
52	With drive	164	Bolts or studs
53	..Pneumatic spring	165	..Integral
54	...Link connected	166	..With removable inner tube
55	...Cylinder and piston		..Armored
56	...Annular	167	..Anti-skid
57	Rigid annulus enclosing	168	...Radial filaments and laminations
58	Plural	169	...Secured into casing
59	With separate annulus guide	170	...Detachable
60	Combined drive	171	...Linked mat
61	Spring	172	Tire secured
62	Links	173	With circumferential band
63	Radial	174	Bound to felly
64	Studs or lugs	175	Tire secured
65	Through bolts	176	Inlaid tread
66	Anti-creep	177	With securing rings
67	With drive	178	...Sectional
68	Anti-creep	179	Tire secured
69	..Leaf spring	180	Wholly metallic
70	..With braces	181	Bound to felly
71	...Link connected	182	Tire secured
72	...Variously arranged	183	Corner-connected sections
73	...Cylindrical units	184	With securing rings
74	...Transverse	185	..External
75	...Straight, radial or tangential	185.1	...Track for single wheel
76	...Center secured	186	...Bound to felly
77	With separate annulus guide	187	...Tire secured
78	Combined drive	188	Inlaid tread

JUNE 1985

	TIRES, RESILIENT	255	Center secured
	..Armored	256	End secured
	..External	257	Single end
	...Tire secured	258	Transverse
189	With securing rings	259	Enclosed
190	...Sectional	260	Rim secured
191	Tire secured	261	Coil
192	..Single tube tires internal	262	Radial
193	...Metal	263	Enclosed
194	Plates	264	Annular guide flange
195	..Inner tube construction	265	Integral enclosure
196	..Casing construction	266	Arcuate interior surface
197	...Embedded	267	Enclosed
198	Metal	268	Integral enclosure
199	Plates	269	Arcuate interior surface
200	Annular	270	...Leaf
201	Linked mat	271	...Circumferentially extending
202	Woven	272	Center secured
203	..Interliners	273	End secured
204	...Cotton, fabric or rubber	274	Single end
205	...Metal	275	Transverse
206	Scale armor	276	Embedded
207	Annular	277	Enclosed
208	..Anti-skid devices	278	Rim secured
209 R	..Treads	279	Retaining ring secured
209 A	Asymmetric tire tread	280	Rim secured
209 B	Lugged tire	281	Rim flange engagement
209 NT	Narrow tread	282	Radial securing means
209 WT	Wide tread	283	Retaining ring secured
209 D	Tread design	284	...Coil
210	...With embedded anti-skid	285	...Circumferential
211	Flush with tread	286	Embedded
212	Radial filaments and laminations	287	Enclosed
213 R	..Applying and removing devices	288	Arcuate interior surface
213 A	Annular securing means	289	Radial
214	...Vehicle carried	290	Sectional tire units
215	Running board carried	291	With plungers
216	Wheel carried	292	With plungers
217	..Tighteners	293	Enclosed
218	...Radial	294	Annular guide flange
219	...Circumferential	295	Sectional tread
220	..Plural tire	296	Integral enclosure
221	..Flexible straps or cords	297	With nonmetallic band
222	...With metal anti-skid	298	Arcuate interior surface
223	..Combined cross chains and plates or bars	299	With nonmetallic band
224	...Superimposed	300	..Sectional
225 R	..Plate or bar type	301	...Annular
225 C	Clamps	302	...Superimposed
226	With traction lugs	303	...Superimposed
227	Flanges	304	...With apertured external binders
228	Integral	305	...Radial bolt secured
229	Calks	306	...Abutting sections
230	Integral	307	...With annular internal binders
231	..Cross chain type	308	...Interfitting
232	...Independent sections	309	...Indented at joints
233	Securing devices	310	..Casing enclosed core
234	Felly and spoke	311	...Separate core
235	Spoke clamped	312	...Removable
236	Felly	313	Sponge rubber
237	Bound to felly	314	With core compression
238	Spoke	315	Superimposed rings
239	...Annular	316	Sectional transversely
240	With side anti-skid elements	317	Balls
241	Securing devices	318	Integral structure
242	Securing rings	319	Recessed
243	...Modified links	320	Chambered
244	Solid	321	Perforated
245	With protectors	322	Chambered
246	..Cushion	323	..Integral
247	..Metallic springs	324	...With recesses
248	...Tubular	325	...Chambered
249	Integral	326	...With perforations
250	Woven	327	...Chambered
251	...Wheel encircling band	328	...Multiple
252	With supporting spring	329	Annular
253	Leaf	450	..Pneumatic tire or inner tube
254	Circumferentially extending	451	..Tire cord reinforcement materials per se

171
BEST COPY AVAILABLE

JUNE 1985

- TIRES, RESILIENT
- 452 ..Pneumatic tire or inner tube
 - 453 ..Cordless tires (e.g., cast tires)
 - 454 ..Tire characterized by closed annular transverse cross section
 - 455 ..Tire characterized by the dimension or profile of the cross sectional shape
 - 456 ..Asymmetric tire
 - 457 ..Asymmetry due to cross sectional profile
 - 458 ..Tire foldable in storage or nonuse condition (e.g., collapsible space saving tire)
 - 459 ..Tire reinforcement material characterized by short length fibers or the like
 - 500 ..Multiple chamber
 - 501 ..Cylinder and piston
 - 502 ..Transverse walls
 - 503 ..Mutually free walls
 - 504 ..Interfitting
 - 505 ..Balls
 - 506 ..With simultaneous inflating means
 - 507 ..With simultaneous inflating means
 - 508 ..Annular chambers
 - 509 ..Mutually free walls
 - 510 ..With simultaneous inflating means
 - 511 ..With simultaneous inflating means
 - 512 ..Sectional casings
 - 513 ..Circumferential
 - 514 ..Rigid inner sections
 - 515 ..With means restricting relative movement between tire and inner tube (e.g., anti-creep feature)
 - 516 ..With means to protect inner tube from rim
 - 517 ..Automatic sealing of punctures (e.g., self-healing)
 - 518 ..Using flowable coating or composition
 - 519 ..On inner surface of tubeless tire
 - 520 ..Sealant in plural layers or plural pockets
 - 521 ..Within or part of construction of inflating inner tube
 - 522 ..Sealant in plural layers or plural pockets
 - 523 ..By compression
 - 524 ..With reinflating means
 - 525 ..Tire characterized by its air impervious liner or inner tube
 - 526 ..Inner tube
 - 527 ..With reinforcement element
 - 528 ..With means to protect tire from rim
 - 529 ..Means other than rim closing the tire opening
 - 530 ..Positive casing closure
 - 531 ..With means enabling restricted operation in damaged or deflated condition
 - 532 ..With sidewall insert to facilitate load support in emergency
 - 533 ..Utilizing additional inflatable supports which become load bearing in emergency
 - 534 ..Inflated or expanded in emergency only
 - 535 ..Utilizing additional noninflatable supports which become load supporting in emergency
 - 536 ..Internal lubricating or cooling
 - 537 ..Means facilitating folding between sidewall portions (e.g., run flat sidewalls)
 - 538 ..Arrangement of grooves or ribs in sidewall
 - 539 ..Having annular inlay or cover on sidewalls (e.g., white sidewalls)
 - 540 ..Characterized by chemical composition or physical properties of external sidewall materials
 - 541 ..Characterized by belt or breaker structure
 - 542 ..Physical structure of reinforcing cords
 - 543 ..Folded ply structure
 - 544 ..Utilizing two or more cord materials
 - 545 ..Consisting of only one ply
 - 546 ..Utilizing at least one ply the cords of which run circumferentially (zero-degree belt)
 - 547 ..With cushioning or other special rubber ply layer
 - 548 ..Reinforcing plies made up from wound narrow ribbons
 - 549 ..Structure where each bias angle reinforcing cord ply has no opposingly angled ply
 - 550 ..Structure made up of two or more sets of plies wherein the reinforcing cords in one set lie in a different angular position relative to those in other sets
 - 551 ..Structure using multiple reinforcing elements made of differing materials
 - 552 ..Breaker or belt characterized by the chemical composition or physical properties of elastomer or the like
 - 553 ..Breaker or belt characterized by its dimensions or curvature relative to the carcass or any other part of the tire
 - 554 ..Characterized by the structure of the bead portion of the tire
 - 555 ..Structure of inextensible reinforcing member
 - 556 ..Apex or filler strip
 - 557 ..Flipper strips
 - 558 ..Chaffer or sealing strips
 - 559 ..Bead contour for engagement with mounting rims (e.g., lips, ribs or grooves)
 - 560 ..Multiple bead cores at each terminal edge or tire supporting surface
 - 561 ..Bead characterized by the radial extent of apex, flipper or chaffer into tire sidewall
 - 562 ..Bead characterized by the chemical composition and or physical properties of elastomers or the like
 - 563 ..Characterized by the carcass, carcass material, or physical arrangement of the carcass materials
 - 564 ..Cushion means inward of outermost carcass ply
 - 565 ..Carcass ply extends from at least one bead region without being folded about bead rings
 - 566 ..Carcass ply only folded about one bead ring
 - 567 ..Carcass ply turnup structure around bead rings
 - 568 ..Folded from outside to inside of bead core
 - 569 ..Characterized by the extent of the fold up into the sidewall of the tire relative to the other tire dimensions
 - 570 ..Sidewall stiffening or reinforcing means other than main carcass plies or foldups thereof about beads
 - 571 ..Physical structure of reinforcing cords

JUNE 1985

TIRES, RESILIENT		407	End connected
..Pneumatic tire or inner tube		408	With rim engaging end lugs
..Characterized by the carcass, carcass		409	Locking rim secured
material, or physical arrangement of		410	Split locking ring
the carcass materials		411	Overlapping section
557 ...With two or more differing cord		412	Bayonet or threaded joint
materials		413	Bayonet or threaded joints
558 ...Carcass characterized by the		414	Hinged section
reinforcing cords of each carcass		415	..Inflating devices
ply being arranged substantially		416	..Vehicle body carried supply
parallel		417	...Rotary joints
559 Reinforcing cords run in opposite		418	..Wheel carried supply
directions in successive carcass		419	...With positive pump operating means
ply, i.e., bias plies		420	Gearing
560 Reinforcing cords of at least one		421	Cam
carcass ply extend transversely		422	Eccentric bearing
across the tire from bead to bead,		423	Obstacle
(i.e., radial ply)		424	Ground
561 Combined with a bias angled ply		425	Casing interposed
562 ...Cords curve from bead to bead in		426	Casing enclosed pump
plural planes, (e.g., s-shaped cord		427	..Combined wheel and valve stem
paths)		428	...With dust cap
563 ...Reinforcing cord of a carcass ply		429	..Combined tire and valve stem
arranged in a crossing relationship		430	...Reinforcements or patches
within the ply, (e.g., woven,		431	..Combined valve stem cap and tool
braided or knitted plies)			
564 ...Carcass characterized by the chemical			DIGESTS
composition or physical properties			
of the elastomers or the like		DIG 1	Pebble ejectors
565 ..Adhesion promoter: rubber to rubber or		DIG 2	Static discharge
reinforcement to rubber		DIG 3	Slits in treads
367 .Patches		DIG 4	Crack resistant
368 ..Mechanically secured		DIG 5	Water filled
369 ...Inside and outside, bolt connected		DIG 6	Peg leg
370 ..With plugs		DIG 7	Rubber valves
371 ..Bandages		DIG 8	Clamps
372 ...Mechanically secured		DIG 9	Bead to rim seal
373 To felly or rim		DIG 10	Split rim seal
375 ..Wheel securing means		DIG 11	Tubeless valves
376 ..Plural tire		DIG 12	White sidewalls
377 ..Retracting wheel section		DIG 13	Valves stem guards
378 R ..Integral rims		DIG 14	Fabrics
378 W Rim welded to disc		DIG 15	Overlap
379.3 ...Interlocking tire and rim		DIG 16	Air impermeable liner
379.4 With elongate bead guard		DIG 17	Grooved rim
379.5 Bead and rim interlock		DIG 18	Hub tires
380 Tire embraced rim		DIG 19	Sandwich breakers
381.3 Deep channel rim			
381.4 With elongate circumferential bead			
guard			
381.5 With channel cover			
381.6 With channel filler			
382 Clincher rim			
383 Pneumatic tire			
384 ...With anti-creep lugs			
385 ..Axial			
386 ..Radial			
387 ...With circumferential tire			
incorporated clamps			
388 ..With annular tire incorporated clamps			
389 ...With mechanically joined ends			
390 Adjustable			
391 Pneumatic tire			
392 Adjustable			
393 ..Reinforced tire base structure			
394 ...Metallic external base ring			
395 ...With annular exterior clamps			
396 ..Separable rim parts			
397 ...Exterior clamps			
398 Lateral acting			
399 ...Interior clamps			
400 Spreaders			
401 Combined sectional channel			
402 ...Sectional channel			
403 Duplicate sections			
404 Pneumatic tire			
405 Pneumatic tire			
406 Split side flange			

JUNE 1985

2.1 SUPERHEATING AND PRESSURE RELEASE
 2.2 ..With extruder
 2.3 ..Multistage
 3 SPRAY TYPE
 4.01 ..Gaseous current
 4.02 ..Combustion product gas
 4.03 ..Antibridging
 4.04 ..Countercurrent
 4.05 ..Intermediate gas outlet or inlet
 4.06 ..Bottom sprayer
 4.07 ..Horizontal sprayer
 4.08 ..Impinging jets
 4.09 ..Multistaging
 4.1 ..Heat recovery
 4.2 ..Spinning sprayer
 4.3 ..Rotary drum with sprayer
 4.4 ..Steam drying or atomizing
 5 FILM TYPE
 6.1 ..Centrifugal
 6.2 ..Wiped film
 6.3 ...Horizontally
 7 ..Moving-film support
 8 ..Gaseous current
 9.1 ...Rotary drum or disk
 9.2 Treated material inside drum
 10 Exterior surface
 11.1 ..Rotary drum or disk
 11.2 ..Internal film
 11.3 ...Rotary disk
 12 ..Inclosing chamber
 13.1 ..Moving film
 13.2 ..Contacting tube
 13.3 ...Outside of tube
 13.4 ..With gas wiping
 14 ..Climbing
 15 ..Zigzag
 16.1 GASEOUS BLAST OR CURRENT
 16.2 ..Submerged combustion
 16.3 ..Steam injection
 17.1 MULTIPLE EFFECTS
 17.2 ..Parallel fluid flow
 17.3 ..Variant multistaging
 17.4 ..Contiguous evaporators
 18 ..Superimposed
 19 ..Combined closed and open
 20.1 ..Variable or counter flow
 20.2 ..With effect switching means
 21 COMBINED CLOSED AND OPEN PANS
 22 CLOSED EVAPORATING CHAMBERS
 23 ..Indirectly heated
 24.1 ...Regenerative
 24.2 ...Heat recovery or regeneration
 24.3 Thermocompression
 25.1 ..Rotatable agitator or coil
 25.2 ...Vertical axis agitator
 26.1 ..Heated tube
 26.2 ...Inclined
 27.1 ...Vertical
 27.2 Detached separator
 27.3 Multieffect in one casing
 27.4 Downflow
 27.5 Floating calandria
 28.1 ..Heating elements
 28.2 ...Baffled
 28.3 ...Spur tubes
 28.4 ...Coils
 28.5 ...Tubular inserts
 28.6 ...Plate-type evaporator
 29 ..Directly heated
 30 ..Samplers
 31 ..Liquid traps or separators
 32 OPEN PANS
 33 ..With rakes
 34 ..Tiltable, removable, or portable
 35 ..Interposed liquid receptacle
 36 ..Steam and furnace heated
 37 ..Steam heated
 38 ..Furnace heated

39 ..Liquid tubes in flue
 40 ..Flues in pan
 41 ..With dampers
 42 STRAINERS OR SKIMMERS
 43.1 FLUID FEED OR DISCHARGE DEVICES
 43.2 ..With alternating operating means
 44 ..Automatic
 45 APPARATUS FOR GRAINING AND SEPARATING CRYSTALS
 46 PRELIMINARY HEATERS AND HEAT ECONOMIZERS
 47.1 PROCESS
 47.2 ..Involving urea
 47.3 ..Involving waste liquid
 48.1 ..Spraying
 48.2 ..Producing liquid product
 49 ..Film
 1.1 MISCELLANEOUS

CROSS-REFERENCE ART COLLECTIONS

900 USING VIBRATORY FORCE
 901 PROMOTING CIRCULATION
 902 USING NATURAL HEAT
 903 ..Solar
 904 ..Floating solar still
 905 SEWAGE TREATMENT
 906 WICK

DIGESTS

DIG 1 Electric heat
 DIG 2 Entrainment
 DIG 3 Fluidized bed
 DIG 4 Foam
 DIG 5 Freezing
 DIG 6 Infrared
 DIG 7 Magnetic coupling
 DIG 8 Multieffect or multistage
 DIG 9 Two liquids dried simultaneously
 DIG 10 Organic
 DIG 11 Biologicals
 DIG 12 Radioactive
 DIG 13 Scale
 DIG 14 Soap
 DIG 15 Special material
 DIG 16 Vacuum
 DIG 17 Two liquids
 DIG 18 Accumulator
 DIG 19 Acid
 DIG 20 Additive
 DIG 21 Coating
 DIG 22 Condensate flashing
 DIG 23 Cooling
 DIG 24 Critical
 DIG 25 Decant, press, centrifuge
 DIG 26 Electric field
 DIG 27 Micropores
 DIG 28 Porous member
 DIG 29 Pebble bed
 DIG 30 Desuper heating
 DIG 31 Deaeration
 DIG 32 Indirect heat exchange
 DIG 33 Two liquids, one a heat carrier
 DIG 34 Caustic
 DIG 35 Viewports, peepsights and sightglasses
 DIG 36 Rabbled hearth
 DIG 37 Ported
 DIG 38 Seed
 DIG 39 Power plant
 DIG 40 Pumps
 DIG 41 Removable units
 DIG 42 Seals

JUNE 1985

1	PROCESSES OF CHEMICAL LIBERATION, RECOVERY OR PURIFICATION OF NATURAL CELLULOSE OR FIBROUS MATERIAL	45	...With addition of chemicals to recirculating fluid
2	.Animal fibers	46	...Steam only
3	.Mineral fibers	47	.With heat recovery
4	.Waste paper or textile waste	48	.With cleaning, preserving or conditioning of apparatus
5	..With organic agent	49	.With testing, sampling or analyzing
6	..With chlorine, chlorine compounds, oxygen, ozone, or per-compounds	50	.Utilizing electrical or radiant energy
7	..With sulfur or sulfur compound	51	.Digestion odor control
8	..With alkali metal, alkaline earth metal, or ammonium compound	52	.Charging and/or discharging fibrous material
9	.With chemical or physical modification of liberated fiber	53	.Vacuum treatment
10	.With non-fiber material added to product	54	.Freezing
11	..Fiber supplied constituent	55	.With classifying, separating or screening of pulp (solids from solids)
12	..Added to web or article	56	.With squeezing, compression, rubbing, kneading
13	.With formation of web or article	57	.With agitation or forced circulation
14	.Including recovery of organic by-product	58	..In rotating vessel
15	..From digester relief gases	59	..Closed circuit circulation
16	..From waste liquor	60	.With washing
17	.Continuous chemical treatment or continuous charging or discharging	61	.Regulatory
18	..With compression, squeezing or compacting of fibrous material during charging	62	..Concentration of chemicals
19	..Plural diverse stage treatment	63	.Gas, vapor or mist contact
20	.With decortication or mechanical preparation of textile fibers	64	..Sulfur dioxide
21	.Defibration by projection or explosion	65	..Oxygen, ozone or air
22	..With chemical other than water or steam	66	..Chlorine containing material
23	.Mechanical defibration in the presence of heated gas or gas under pressure	67	...Chlorine dioxide
24	.Chemical treatment after start or completion of mechanical defibration	68	..Steam only
25	..With additional chemical treatment before start of defibration	69	.Non-continuous liquid phase
26	.Simultaneous mechanical defibration and chemical treatment	70	.Treatment with particular chemical
27	.Mechanical defibration of logs or blocks after chemical treatment	71	..Treatment of ground-wood or sawdust
28	.With plural or specified mechanical defibering step	72	..Organic
29	.With regeneration, reclamation, reuse, recycling or destruction of digestion fluid	73	...With inorganic chlorine containing material
30.1	..With destruction of organic ingredient in or smelting of liquor	74	...Chlorine containing
30.11	...Treatment of kraft pulping chemicals	75	...Fat, fatty oil or higher fatty acid
31	...Flames combustion	76	...Acids, salts or esters
32	...Liquor from digestion using organic compound or including element other than Na, Ca, Mg, O, C, H or S	77	...Alcohols or phenols
33	...With mixing of liquors from different digestions	78	..Per-compound (e.g., peroxide, perborate)
34	...Plural diverse digestion of same fibrous material	79	..Heavy metal or aluminum containing
35	...Residue converted into liquor different from original liquor	80	..Phosphorus, boron or silicon containing
36	...Sulfur dioxide or sulfite containing spent liquor	81	..Nitrogen oxide, acid, or salt thereof
37	..Digestion fluid reused on different fibrous materials	82	..Sulfur containing
38	...With addition of chemicals prior to reuse	83	...Sulfur dioxide or sulfite
39	In digester	84	Plural diverse stage treatment
40	...Without treatment or modification	85	Chlorine containing material in at least one stage
41	..Recirculation (includes separation from fibers)	86	Alkali metal, ammonium, alkaline earth metal or magnesium hydroxide or carbonate in at least one stage
42	...With treatment of fluids during recirculation	87	..Chlorine containing
43	Removal and/or separation of portion of recirculating fluid	88	...Plural diverse stage treatments
44	With recombining	89	Alkali metal, ammonium, alkaline earth metal or magnesium hydroxide or carbonate in at least one stage
		90	..Alkali metal, ammonium, alkaline earth metal or magnesium hydroxide or carbonate
		91	.Particular raw cellulosic materials
		92	..Fossilized, (e.g., peat)
		93	..Bark
		94	..Bamboo
		95	..Cotton fibers or linters
		96	..Sugar cane, bagasse or cornstalks
		97	..Cereal grasses or straws
		98	..Bast (e.g., flax, hemp, jute, ramie, sisal)
		99	..Non-wood
		100	PROCESSES AND PRODUCTS
		101	.Pore forming in situ (e.g., gas generation)
		102	.Utilizing non-aqueous suspending medium
		103	.Including solid non-waterlaid preform

PROCESSES AND PRODUCTS	
104	..Including solid non-waterlaid preform
105	..Between separately formed webs
106	..Metallic
107	...Electrical conductor
108	..Glass
109	..Woven fabric or parallel strands
110	..Non-uniform, irregular or configured web or sheet
111	..Watermarking
112	..Creping and/or crinkling
113	...With coating and/or laminating
114	...With additional deformation
115	..By perforating
116	..By fluid pressure
117	..By configured forming mold
118	..Subsequent treatment by irregular or configured die
119	..With winding or roll forming
120	..With coating
121	..With cutting and/or removing material
122	..With heat
123	..With pressure
124	..Multi-layer waterlaid webs or sheets
125	..With non-fiber added between layers
126	..Layers of different properties
127	...Color
128	...Organic additive
129	...Inorganic additive
130	...Fiber
131	...Dimension
132	...Orientation
133	..Separately formed webs subsequently united
134	...On common felt or carries (non-mold)
135	..With printing and/or variegated coloring
136	..With coating after drying
137	..With treatment subsequent to coating
138	..Plural layer coating
139	..Electrical or magnetic product characteristic
140	..Cigarette paper
141	..Safety, identification and fraud preventing paper
142	..Plural fiber containing
143	..Undigested cellulosic fiber
144	..Animal or proteinaceous
145	..Leather
146	..Mineral
147	..Synthetic (including chemically modified cellulose)
148	..Waste paper or textile waste
149	..Non-wood
150	..Fibers of different dimensions
151	..Undigested cellulosic fiber
152	..Animal or proteinaceous fiber
153	..Mineral fiber
154	..Asbestos
155	...With Portland cement
156	...With organic additive
157.1	..Glass
157.2	..Synthetic fiber (including chemically modified cellulose)
157.3	..Synthetic resin
157.4	...Polyamide, polyester or polyurethane
157.5	...Polymerized unsaturated compound
157.6	...Hydrocarbon or halohydrocarbon
157.7	..Cellulosic
158	...Regenerated cellulose, viscose or rayon
159	..Non-fiber additive
160	..Fire proofing agent
161	..Preservative or antioxidant
162	...Biocidal
163	..Coloring agent
164.1	..Fiber supplied constituent
164.2	..Synthetic resin
164.3	...Ion exchange resin or molecular sieve
164.4	...Epoxy containing reactant
164.5	...Silicon containing
164.6	...Sulfur containing
164.7	...Nitrogen containing
165	...Ester type
166	...Phenol-aldehyde
167	...Amine- or amide-aldehyde
168.1	...With additional organic reactant
168.2	...Polymerized unsaturated compound
168.3	...Nitrogen containing compound
168.4	...Acrylamide containing
168.5	...Heterocyclic N or S or epoxy component
168.6	...Heterocyclic N or S or epoxy component
168.7	...Hetero S or epoxy component
169	...Ester type
170	...From polyene compound
171	..Natural hydrocarbon gum (rubber)
172	..Bitumen
173	..Wax
174	..Hydrocarbon
175	..Protein
176	..Carbohydrate
177	...Cellulose (non-fibrous)
178	...Cellulose derivative (e.g., cellulose ester)
179	...Gum
180	..Fat, fatty oil, or higher fatty acid
181.1	..Natural resin
181.2	..Inorganic
181.3	...Metal salt other than silicate
181.4	...Sulfate or sulfite
181.5	...Metal oxide or hydroxide
181.6	...Metal other than alkali metal, magnesium, or alkaline earth metal
182	...Silicon containing additive other than clay
183	...Alkali metal silicate
184	...Clay
185	...Free metal or free carbon containing
186	..With preparatory chemical treatment of fiber
187	..Incorporation procedures
188	...Application to formed web
189	...Part added to furnish or pulp
190	...On mold
191	..Hydration and/or gelatinization
192	..Non-uniform internal structure
193	..Reclamation, salvage or reuse of materials
194	..White water
195	..Broke or trim
196	..Utilizing electrical or wave energy
197	..Lead strip forming and/or guiding
198	..With cutting and/or slitting
199	..Fluid deckle or shower
200	..With folding or twisting (e.g., roving)
201	..With stretching, tensioning, decurling, flexing or breaking
202	..With measuring, inspecting and/or testing
203	..Conditioning, preparing or repairing of apparatus
204	..Wire stringing
205	..Combined processes
206	..Running or indefinite length work forming and/or treating processes (e.g., web)
207	..Forming single web between opposed forming surfaces
208	..Subsequent treatment of formed web
	...Pressure
	...With heating and/or cooling
	...Heating, cooling, gas or vapor contact
	..Treatment of slurry on mold surface

176

JUNE 1985

PROCESSES AND PRODUCTS	266	..Acting on product on mold
..Running or indefinite length work	267	..Molding pulp and non-pulp insert or preform
forming and/or treating processes (e.g., web)	268	..Running or indefinite length work
209 ..Treatment of slurry on mold surface	269	..With product stacking or piling means
210 ...Vibration or agitation	270	..Flexing, bending, straightening or decurling means
211 ...Pressure member	271	..Sheet or web
..Inhibiting or restricting drainage through mold	272	..Apparatus repair, cleaning or conditioning
212 ..Directing slurry into association with mold	273	..Wire changing and/or tensioning
213 ...Projecting or slinging stock	274	..Of porous or foraminous member (e.g., felt or mold)
214 ...Pressure forming	275	..Means applying fluid
215 ...Counter or transverse of mold movement	276	...To cylinder
216 ...Mechanical treatment of slurry in head box or approach flow	277	...Reciprocating
217 ..Suction through mold	278	...With suction means
218 ..Article forming processes (pulp molding)	279	...And suction means
219 ..Plural stage deposition	280	..Web creping or crinkling type
220 ..Pressing with flexible diaphragm	281	..Cylinder and doctor
221 ..Treatment subsequent to removal from forming mold	282	..Circumferentially grooved cylinder
222 ...Surface treatment	283	..With product winding or reeling means
223 ...Reshaping (i.e., changing configuration)	284	..Tube winding type
224 ...Heat and/or mechanical pressure	285	..With tube cutting or slitting means
225 Boards or sheets	286	..With cutting, scoring, perforating or tearing
226 ..Applying heat to work on forming mold	287	..With folding, rolling or twisting means
227 ..Applying mechanical pressure to work on forming mold	288	..Molding and burnishing means
228 ..Accretion from bulk	289	..Running or indefinite length product forming and/or treating means
229 ..Vibration of mold and/or slurry	290	..Molding and heat exchange means
230 ..Separation from mold or core	291	..Moving impermeable member applying stock to mold
231 ..Articles	292	..Means flinging or projecting stock against mold
232 APPARATUS	293	..Product slides relative to molding surface (e.g., extrusion molding)
233 ..Digester	294	..Mold intermittently moving relative to supply
234 ..With mechanical defibering means	295	..Concave molding surface in longitudinal or transverse section
235 ...Concurrent	296	..Irregular or configured molding surface (e.g., corrugated)
236 ...Continuous	297	..Pneumatic pressure or vacuum means acting directly on stock on mold surface
237 ..Continuous	298	..Plural separate streams of stock applied to mold
238 ..Automatic control	299	..Longitudinally spaced points of application
239 ..With recovery means	300	..Plural molds or plural spaced areas of application on a single mold
240 ..With incinerator or evaporator	301	..Common vat or stock feed
241 ..Plural	302	..Tangent cylinder molds
242 ..Combined	303	..Molds converge to unit web
243 ..With pulp agitating or circulating means	304	..Webs united on common carrier (e.g., felt)
244 ..Rotating digester	305	..Molds with subsequent separate pressing means
245 ..Removable basket or retaining means	306	..Means removing web product from molding surface
246 ..Charging and/or discharging means (including blow pits)	307	..Blow off acting through mold
247 ...Target, impact, explosion	308	..Means treating stock on molding surface
248 ..Forced circulation or percolation of fluid only	309	..Irregular treating member or acting non-uniformly across web product
249 ...With heating	310	...Fluid jet or suction means (e.g., shower deckle)
250 ..Heating means	311	...Submerged in supply
251 ..Strainers	312	...Solid treating member
252 ..Automatic control	313	...Moving
253 ..Of plural operations	314	...Rotary
254 ..Of stock working device	315	..Means directing stock into contact with molding surface
255 ..Of lead strip former and/or break sensing	316	...On to under surface only of mold
256 ..Of mold movement	317	...Confined stock stream on forming surface (e.g., pressure forming)
257 ...Transverse movement of wire		
258 ..Of stock consistency		
259 ..Of stock feed to forming device		
260 ..Of product cutting device		
261 ..With beating, refining, and/or disintegrating means		
262 ..Electric controls or systems		
263 ..Measuring, testing, inspecting, indicating or illuminating		
264 ..White water or broke recovery, recirculation or treatment		
265 ..With coating or impregnating means (including printing)		

177

BEST COPY AVAILABLE

APPARATUS	374	...Wear face structures and materials
.Running or indefinite length product	375	.With heat exchange means
forming and/or treating means	376	..Heated foraminous forming mold
..Means directing stock into contact	377	..Heated die
with molding surface	378	...Contacting work on forming mold
318 ...Cylinder mold with endless forming	379	Plural successive heated dies
belt about	380	.Slurry supply conditioning or condition
319 Superposed or lateral stock pool		maintaining
320 ...Superposed or lateral stock pool type	381	.Combined
321 Cylinder mold	382	.Foraminous forming mold for discrete
322 ...With diverse non-pulp material inlet		articles (pulp molding)
323 ...Immersion vat type (e.g., cylinder	383	..Differing areas of porosity or of
machine vat)		suction on single mold surface
324 Stock flow direction reversing means		(including masking)
325 Stock directed transversely of mold	384	..Centrifugal
direction	385	...With moving slurry supply container
326 Stock applied at plural points on	386	..With handle or hand grip
mold periphery	387	..Accretion from bulk (i.e., immersed
327 Baffles diverting or directing flow		mold)
against cylinder mold	388	...Means moving mold through, into or
328 Concentric with cylinder		out of slurry
329 Adjustable to or from cylinder	389	Relatively moving or separate mold
330 Fluid level control		and suction backup
331 Side seals	390	Plural and/or compartmented slurry
332 Mold hanging		container
333 Centerless	391	Rotary or swinging carrier
334 Mask, deckle or apron	392	With compressor
335 With drain or suction means, for	393	Reciprocating carrier
white water	394	With compressor.
336 ...Flow box, slice, and/or approach flow	395	With compressor
337 Recirculation skimming or excess	396	..Press felting (i.e., pressure member
stock take-off		acting on pulp on mold)
338 Transversely crossing inlet into	397	...Plural molds (cavities)
flow box	398	Plate or sheet type (i.e., opposed
339 Closed to atmosphere		flat platens)
340 Air cushion at above atmospheric	399	...Plate or sheet type
pressure	400	With cores (e.g., molding of
341 Vibratile or moving member treating		apertured plates)
stock	401	...Flexible diaphragm
342 Immersed rotary member (e.g.,	402	About foraminous core
rectifier roll)	403	...Contracting matrix
343 With vanes or pulp stream dividing	404	About foraminous core
means	405	...Expanding and/or contracting core
344 ...Slice	406	About foraminous core
345 Plural, longitudinally spaced	407	..Mold charging means
346 Width adjustment	408	...Pressure charging
347 Flexible or pivoted	409	...Plural discrete areas of mold
348 ..Flexible endless band type mold (e.g.,	410	..Article ejecting
Fourdrinier)	411	..Dipping molds per se
349 ...Concurrently moving back up	415	.Compressor
350 ...Variable slope	416	..Configured die (non-planar)
351 ...Means retarding or controlling		
drainage through mold		DIG-1 TS
352 Wire bottom scrappers or deflectors	DIG 1	Foraminous forming member
353 ...Mask, deckle, or apron	DIG 2	Chip soaking
354 ...Table structure	DIG 3	Wetting agent
355 Vibrating or shaking (e.g., shake	DIG 4	Pitch control
frames)	DIG 5	Alpha cellulose
356 Perpendicular to plane of wire	DIG 6	Moisture and basic weight
357 ..Cylinder molds per se	DIG 7	Water collectors (e.g., save-alls)
358 ..Press and felt	DIG 8	Chlorine-containing liquid regeneration
359 ...With separate heated drying means	DIG 9	Uses for paper making sludge
360.1 ...Plural sequential pressings	DIG 10	.Computer control of paper making
361 ..Solid means acting on formed web		variables
362 ...Marking or embossing	DIG 11	..Wet end paper making variables
363 ..Suction devices	DIG 12	Seasoning
364 ...Systems		
365 ...Reciprocating		
366 ...Adjustable width		
367 ...Traveling suction face		
368 Rotary pervious cylinder		
369 With non-rotating internal suction		
box		
370 Plural suction areas		
371 Box carried seals		
372 Shell structure		
373 ...Roller face (suction not through		
rollers)		

JUNE 1985

1	PROCESSES	64	..Controlling feed
2	WITH RECORDER	65	...To alternating weigh chambers
3	..With computing or totalizing means	66	...And discharge
4	..With recording of a factor additional to weight	67	Overload removal
5	..Weight identification	68	..Flow terminator requiring external reset
6	..Of both gross and tare on one record receiver	69	..Plural feed, simultaneous cutoff
7	..Responsive to means sensing removal of material	70	..Sequential feeding, plural ingredients
8	..With record receiver advance	71	..Feed and discharge
9	..By weigher	72	...Manually initiated discharge
10	..External marker operator	73	..Receiver operated reset
11	..Recorder element mounted on poise	74	..Latch release
12	..Responsive to timer, or completion of weighing operation	75	...Sequential latch release
13	..Weigher sets type	76	...With magnetic operator
14	SELECTIVELY PRESET CYCLE FLOW TERMINATOR	77	With serially connected switch
15	WITH TOTAL REGISTER	78	...Reciprocating closure
16	..Integrator of steadily flowing fluent material	79	..Holding magnet
17	..Of distinct successive loads	80	..With external intercontrol
18	..Cycle totalizer	81	..Initial partial charge
19	..Single totalizer operated by plural weighers	82	..Overload removal
20	...By preliminary translation of rotary weighers	83	..Rotary
21	...By intermittently used one of plural weighers	84	..Power-driven
22	..Weigh beam operated	85	..Electromagnetic latch release
23	..Discharge valve operated	86	..With preliminary translation
24	..Weigh chamber operated	87	...Initiates feed control operation
25	COMPUTER	88	By cam on weigh chamber
26	..Computer and weigher independently operated by common load holder	89	..Stationary weigh chamber
27	..Weighing beam dial and computing beam dial with separate poises	90	..Alternating weigh chambers
28	...Separately pivoted beams	91	..Divided unit
29	...Tabular-type computer	92	...With relatively oscillating partition
30	..Ancillary weigher	93	Pivoted feed diverter
31	..Independent computer scale and index	94	...Oscillating
32	..With adjustable linkage to weight offsetting means	95	Valve means correlated with weigh chamber
33	...Coaxial pointers	96	Opened by gravity
34	..Tabular-type computer	97	Mounted externally of weigh chamber
35	..Slidable poise moves table	98	..Feed diverter
36	..Weigher moves table	99	...With discharge valve
37	...Rotatable drum	100	..Valved discharge
38	With manually operated reading assistance	101	..Siphon discharge
39	With additional reading window in drum housing	102	..Oscillating
40	...Encased disc	103	..Plural chambers
41	..Externally movable table	104	..With simultaneous discharge
42	...Axially rotatable	105	..Discharge valve or gate
43	..Calibrated index arm	106	..Opening initiated by feed terminator
44	..Table integral with balance beam	107	..Closing initiates feed
45	WITH ALARM OR SIGNAL	108	..Power actuated
46	..In unbalance	109	...Clutched
47	..In balance	110	...Magnetically operated
48	..Electric	111	..Mechanically interconnected with feed valve
49	..Of additional counterpoise	112	..With linkage operator
50	WITH TESTING	113	..Latch release
51	..Coin size	114	..Correlated feed and discharge
52	WITH CONVEYING MEANS HANDLING SUCCESSIVE RECEIVERS	115	..Oscillating weigh chamber
53	..Receiver presence responsive	116	..Feed
54	..Rotary	117	..Weigh chamber placement initiates flow
55	..Separate weigh chamber	118	..With receiver retainer
56	..Separate weigh chamber	119	..Conveyer
57	..Simultaneously operated weigh chambers	120	...With feed cutoff
58	PLURAL WEIGHERS ON ROTARY SUPPORT	121	...Variable speed
59	DISCHARGE FROM WEIGHER TO RECEIVER	122	..Sequentially actuated flow control means
60	WEIGHER RESPONSIVE MATERIAL CONTROL	123	...Distinct controllers
61	..Translatable among plural sources	124	WITH LOCK OR SEAL
62	..Remote discharge station	125	CHECK CONTROLLED
63	..With additional material-presence responsive means	126	COLLAPSIBLE, FOLDABLE, KNOCKDOWN
		127	..With carrying case
		128	WITH REPAIR OR ASSEMBLY MEANS
		129	CONVERTIBLE
		130	..Hand truck
		131	..Hand manipulatable load pickup device
		132	STRUCTURAL INSTALLATION
		133	..Geographic
		134	...Pit
		135	...With guard or shield
		136	..Vehicle
		137	..Running gear springs

STRUCTURAL INSTALLATION		209	..Interconnected load-supporting
138	.Vehicle		expansible chamber
139	..Running gear springs	210 R	..Electrical current generating or
140	...With indicator disconnect means		modifying
141	..Unitary load transferrer and weigher	210 C	...Capacitors
142	..Hand truck	210 EM	...Electromotive or electromagnetic
143	..Hydraulic weigher		force
144	..Building	210 FP	...Frequency changes or pulse counts
145	..Refrigerator	211	..Strain gauge
146	..Furniture or room fixture	212	..Repositioning in response to deflection
147	WITH WEIGHER LOADING OR UNLOADING MEANS		under load
148	..Jack	213	..Electrically actuated poise
149	..Hoist	214	...With indicator of poise position
150	..Hand manipulatable weigher	215	...Speed control of poise
151	..Container type	216	..Pendulum
152	EQUAL-ARM BEAM TRANSFER MECHANISM	217	..Plural opposed
153	LOAD-HOLDER TRANSFER MECHANISM	218	...Translatable
154	..Unitary with weigher	219	...Tape-driven
155	..Transmission disconnect means	220	..Drives indicator through transmission
156	MEANS HOLDING LOAD-DRIVEN ELEMENT		mechanism
157	AGAINST MOTION	221	...Flexible member
158	..Separates bearing parts	222	...Gearing
159	..At transmission mechanism	223	...Rectilinear rack
160	..Balance beam	224	..Pointer fixed to pendulum
161	..Plural beams	225	..Spring
162	..At indicator	226	..Temperature compensator
163	SACK SUPPORT	227	...Modifies leverage
164	LOAD GUIDE	228	...Acts on spring
165	..Chute	229	..Cantilever
166	..Rail	230	..Force modifier connects spring and
167	PRESET		load-holder
168	..Responsive to load receiver	231	..Load-holder steadying structure and
169	..Ancillary pointer		spring carried by casing
170	..Fixed index or dial	232	..Coil spring in sleeve casing
171	..Spring support	233	...With vertical pointer slit
172	..Effective length of spring	234	..Magnified indication of spring
173	..Lever		deformation
174	..Lever balance-type beam	235	..Counterweight type
175	..Load-arm length	236	..Variable fulcrum
176	..Indicator structure	237	..Progressive counterweight pickup
177	..Rack connection	238	WITH CASING
178	..In transmission	239	..Base
179	..Counterweight	240	..With standard
180	ILLUMINATED	241	...Carrying additional housing
181	..Projected	242	...Access opening in cylindrical wall
182	WITH BEARING SHIELD	243	..Penetrated by load-holder support
183	WITH CASING CLOSURE OR SHIELD	244	ASSEMBLY SUPPORT
184	..Transparent	245	COMBINED
185	..Lens	246	BEAM
186	LUBRICATOR	247	..Coarse and fine sliders
187	SHOCK ABSORBER, DAMPER	248	..Plural counterweight pickup
188	..Electrical or magnetic	249	..Transmission interconnected with
189	..Indicator mechanism		slidable counterweight
190	..Load-holder transmission mechanism	250	..Counterweight retention
191	..Fulcrumed lever	251	..Adjustable load-arm connection
192	..Load holder	252	..Plural counterweights
193	EQUAL ARM TYPE	253	LOAD HOLDER
194	..With counterweight manipulating means	254	..Fluid transmission
195	..Elongated flexible counterweight	255	..Sway or tilt prevention
196	..With indicator tower	256	..Pivotaly interconnected transmission
197	..With bias toward balance		levers
198	..By spring	257	..Integrated force delivered by lever
199	...Torsion bearing type		extension from interconnection
200	..With longitudinally movable poise	258	..Separate lever loaded by load-holder
201	..With check link		levers
202	PLURAL DISTINCT LOAD HOLDERS WITH COMMON	259	...With additional serially connected
203	EVALUATOR		lever
204	..Load comparing type	260	..Adjusting means
205	SELF-POSITIONING	261	..Movably mounted pivot
206	..Offsets over or under load	262	..Scale pan
207	..Supplemental weight offsetting means	263	..Suspended
208	..Transferred responsive to	264	MISCELLANEOUS
	self-positioning means		
209	..Remote indicator		DIGESTS
210	..Slidable weight	DIG 2	Digitizers mechanical
211	..Buoyancy type	DIG 3	Digitizers electrical
212	..Fluid transmission to pressure gauge	DIG 4	Digitizers non-sensing

CLASS 177 WEIGHING SCALES

177-3

JUNE 1985

DIG 5 Magnets
DIG 6 Photoelectric
DIG 7 Pneumatic controls
DIG 8 RR motion
DIG 9 Scale bearings
DIG 10 Telemetric
DIG 11 Vibrators

181

BEST COPY AVAILABLE

JUNE 1985

0.5	MISCELLANEOUS	170	..Laminated type
18	SPEAKING TUBES	171	..Mounting or suspension means
19	..Systems	172	..Elastic suspension means
20	..Alarms and indicators	173	..Particular shape
21	..Combined mouth and ear pieces	174	..Variable thickness
22	..Mouthpieces	175	SOUND-MODIFYING MEANS
30	..Tubes	176	..Lens
101	AUDITORIUM	177	..Intensifying horn
102	GEOPHYSICAL OR SUBSURFACE EXPLORATION	178	..Collapsible
103	..Well logging	179	..With particular mounting structure
104	..Programmed or timer-controlled	180	..Material
105	..Directional source or detector	181	..With vibratory filaments
106	..Bore hole or casing condition	182	..With resonant chamber
107	..Seismic wave generation	183	...Double wall
108	..Programmed or timer-controlled	184	..Having apertures in walls
109	..Seismic source and detector	185	..With sound-path restriction
110	..Aerial	186	...Adjustable
111	..Underwater	187	..Plural intensifying portions
112	..Plural sources	188	...Similar portions
113	..Plural detectors	189	..Multisection housing
114	..Seismic wave generation	190	...Separable
115	..Vehicle-mounted	191	..With external sound deflector
116	..Bubble suppression or control	192	..Particular shape of the horn
117	..Explosive	193	...Spiral sound path
118	...Gas	194	...Doubly folded sound path
119	Underwater	195	...Wide angle annular outlet
120	..Fluid means	196	..Within tubular means
121	...Underwater	197	..Adjustable
122	..Moving weight	198	..Housing or enclosure (e.g., sound confining and absorbing)
123	..Seismic wave detection	199	..Speaker type
124	ECHO SYSTEM	200	..Machine type enclosure
125	..Altitude or depth detection	201	...Office type devices (e.g., typewriters, teleprinters, etc.)
126	SOUND LOCATION	202	...Electrical type devices (e.g., transformers, motors, etc.)
127	ANATOMIC OR PROSTHETIC RELATION	203	...Reaction engine test chamber
128	..Dentophone	204	...Internal-combustion engine
129	..Ear and mouth	205	...Partial enclosure or shroud
130	..Ear	206	..By wave interference
131	..Auditory canal insert	207	..Mechanical vibration attenuator
132	...Stethoscope	208	..Damping of flexural structure
133	...With diaphragm	209	..Relatively moving parts
134	...Deflector type	210	..Sound absorbing fence or screen (e.g., jet engine or vehicle noise)
135	...Eardrum	211	..Combined
136	...Ear insert	212	..Muffler, fluid conducting type
137	..Deflector type	213	..Reaction engine type
138	..Receiver	214	...Upstream (e.g., intake silencer)
139	MECHANICAL TELEPHONE	215	...With adjustable outlet nozzle
140	WAVE GENERATION AND DETECTION	216	...Longitudinally adjustable section
141	WITH VESSEL	217	...Removable silencer unit (e.g., mobile)
142	COMBINED	218	...Ground installation silencer
143	WAVE GENERATION	219	...With adjustable internal baffles
144	MOVING SOUND PRODUCER OR DEFLECTOR	220	...With disparate fluid mingling
145	PLURAL DIAPHRAGM SOUND SOURCES	221	...Liquid
146	..Plural chambers	222	...With sound absorbing material
147	..With sound-absorbing means	223	..Silencer for firearms
148	..Three diaphragms	224	..Sound absorbing ventilating duct or curb (e.g., a/c, heat, air flow type)
149	DIAPHRAGM AND ENCLOSURE	225	..With fan to assist fluid flow
150	..Moisture proof	226	..With adjustable fluid flow
151	..Recessed (e.g., wall-mounted, etc.)	227	..Pipe-muffler (e.g., tail pipe type)
152	..With sound-absorbing means	228	..With exhaust pipe
153	..With horn	229	..Carburetor, burner, or compressor intake silencer
154	..Rounded enclosure (e.g., curved, etc.)	230	..Pneumatic type motor (e.g., air hammer, etc.)
155	..Inclined diaphragm	231	..With solid particle separator (e.g., spark arrestor, vacuum cleaner, etc.)
156	..Reflector baffle	232	..Separate distinct units serially connected
157	..Reflex baffle	233	..Liquid motion silencer
158	DIAPHRAGM	234	...Water-closet type
159	..Microphone type	235	..Underwater discharge
160	..With horn		
161	..With resonant chamber		
162	..With direct mechanical connection to drive unit		
163	..Stylus bar		
164	..Plural dependent diaphragms		
165	..Sectional diaphragm		
166	..Concentric annular section		
167	..With damping means		
168	..Critically defined material or coating		
169	..Metallic material		
	..Fibrous material		

	SOUND-MODIFYING MEANS	403	REFRIGERATOR COMPRESSOR MUFFLER
236	.Muffler, fluid conducting type	404	HOBBY CRAFT ENGINE MUFFLER
237	..With muffler cut-out		
238	..With pressure relief safety valve		
239	..Multiple distinct inlets and/or outlets		
240	...Outlets		
241	..Manifold type		
242	..Adjustable muffler (i.e., internal or external parts)		
243	..Mouthpiece (e.g., telephone, microphone, etc.)		
244	..With repair, replacement, or quick disassembly		
245	..Corrosion prevention		
246	...Internally coated parts		
247	...Nonmetallic		
248	...Straight-through passage		
249	...Continuous conduit		
250	With expansion chamber		
251	And side branch		
252	And multi-passages		
253	...With sound absorbing material		
254	...With muffler bypass		
255	Valve controlled		
256	...Expansion chamber		
257	..With sound absorbing material		
258	..And multi-passages		
259	...Pervious material interposed in flow path		
260	..With disparate fluid mingling		
261	...Liquid		
262	Sprayed		
263	...Induced by suction		
264	Motion induced		
265	..With baffle or baffle structure		
266	...Retroverted		
267	And side branch chamber		
268	...Coaxial foraminous walls		
269	...Multi-passages		
270	...Expansion chamber type		
271	With alternating partial baffles along the length of casing		
272	With adjustable or flexible wall		
273	Plural chambers		
274	And side branch chamber		
275	With centrifugal flow		
276	And multi-passages		
277	...Side branch		
278	...Movable baffle		
279	Biased		
280	...Spiral		
281	...Helical		
282	...Perpendicular and/or oblique		
283	...Casings		
284	Air or liquid cooled		
285	..Sound absorbing panels		
286	..Load bearing block type structure		
287	..Specific acoustical properties or dimensions		
288	..Movable/foldable panels		
289	..Cellular		
290	..Light permeable		
291	..Multilayer panel or wall structure		
292	...With membrane outer layer		
293	...With perforated or porous face and honeycomb-like core		
294	..With channels or cavities in surface layer		
295	..Materials		
296	..Space absorbers		
	..Methods		
	CROSS-REFERENCE ART COLLECTIONS		
400	WAVE COUPLING		
401	.Earth		
402	.Liquid		

JUNE 1985

- | | | | |
|------|--|-----|--|
| 1 | CONVERTIBLE | 120 | ..And means to prevent inadvertent or unauthorized opening |
| 2 | .Bed | 121 | ..Fastening means secured to mouth frame |
| 3 | .Bureau | 122 | ..Including frame or frame members substantially surrounding luggage mouth |
| 4 | ..Top and front opening | 123 | ..Including means to facilitate attachment to the hand luggage |
| 5 | ...Compartment top | 124 | .Wall detail |
| 6 | ..Front opening | 125 | ..Multi-layer or ply |
| 7 | ...Compartment front | 126 | ..Specified seam structure |
| 8 | .Chair | 127 | ..Reinforced |
| 9 | .Shelved | | |
| 10 | ..Desk flap | | |
| 11 | ..Desk or table | | |
| 12 R | ..Camp kits | | |
| 12 A | Combined with or convertible to table or chair | | |
| 13 R | .Wardrobe | | |
| 13 B | ...Curtains | 900 | CROSS-REFERENCE ART COLLECTIONS |
| 13 C | ...Followers | 901 | BRIEF CASE TYPE |
| 13 D | ...Ironing boards | 902 | .Flat opening |
| 13 E | ...Irons, pads, latches, etc. | 903 | .With closure flap |
| 13 F | ...Shoe box | | ZIPPER |
| 13 G | ...Hats | | |
| 13 H | ...Tray type | | |
| 14 | ..Extensible | | |
| 15 R | ...Telescopic | | |
| 15 A | Convertible to enlarged open-top container | | |
| 15.1 | .Luggage carrier | | |
| 16 | SAMPLE CASES | | |
| 17 | .Link-supported tray | | |
| 18 R | SUPPORTING DEVICES | | |
| 18 A | ..Wheeled | | |
| 19 | TRUNKS | | |
| 20 | .Circular end | | |
| 21 | .Extensible and sectional | | |
| 22 | ..Telescopic | | |
| 23 | .Wall | | |
| 24 | .Frames and interior braces | | |
| 25 | .Reinforcing strips | | |
| 26 | .Protecting harness | | |
| 27 | .Harness | | |
| 28 | .Valances | | |
| 29 | .Tray movers and supporters | | |
| 30 | ..Lid-operated, movement | | |
| 31 | ..Pivoted tray | | |
| 32 | ...Vertical pivot | | |
| 33 | ..Sliding tray | | |
| 34 | ..Link connections and props | | |
| 35 | .Trays | | |
| 36 | .Followers | | |
| 37 | .Corner shields and buffers | | |
| 39 | .Handles | | |
| 40 | .Materials | | |
| 100 | HAND LUGGAGE (SUITCASE, BRIEFCASE, ETC.) | | |
| 101 | .Theft resistant | | |
| 102 | .With means for securing an accessory | | |
| 103 | .Variable volume | | |
| 104 | ..Telescoping sections | | |
| 105 | ...Selectively adjustable | | |
| 106 | .With means to bias luggage mouth into open configuration | | |
| 107 | .Knockdown or collapsible | | |
| 108 | .Plural | | |
| 109 | .Compartmented | | |
| 110 | ..Removable compartment or compartment-forming member | | |
| 111 | ..Independently closable compartments | | |
| 112 | .With plural access openings | | |
| 113 | .Closure panel struck from luggage wall | | |
| 114 | .Coacting closure elements hinged to opposed side walls | | |
| 115 | .With handle | | |
| 116 | ..Detachable | | |
| 117 | ..Plural interengaging elements | | |
| 118 | ..Closure locking means manipulated via handle | | |
| 119 | .With means to fasten the hand luggage in closed condition | | |

JUNE 1985

1 R	PROCESSES AND PRODUCTS	48	Iron group metals (i.e., iron, nickel, cobalt)
1 T	..Electrolysis	49	Nickel
1.5	...Analysis and testing	50 R	Cadmium
2	...Actinide series element or compound	50 Y	From cyanide
2	..Electroprinting	51	Chromium
2.1	..Electroforming battery electrode	52 R	Copper
3	..Electroforming	52 Y	From cyanide
4	...Reproductions	53	Lead
5	Recording devices	54 R	Tin
6	Printing plates, electrotypes, dies and the like	54 L	Alkaline tin
7	Mirrors and reflectors	55 R	Zinc
8	Ornamental	55 Y	From cyanide
9	Rolls, rings or hollow bodies	55.5	Antimony Plating
10	...Powder, flakes or colloidal suspensions	56 R	With non-metals
11	...Perforated or foraminous articles	56 M	Magnesium base
12	...Sheets; webs, wires, filaments	57	Peroxides
13	Of indeterminate length	58	Aluminum base
14.1	..Coating	58.5	...Non-aqueous solution
	...Specific shapes, forms or configurations	59 R	..Synthesis
15	Localized areas	59 F	Fluororganic compounds
16	Uniting and repairing	59 M	Metal
17	Printing members	59 AM	Alkali metal
18.1	Designs and ornamentation	59 QM	Of organometallic compound
19	Mirrors and reflectors	59 L	Organolead compound
20	Non-conducting base	60	...From fused bath
21	Textile fabrics	61	Compound
22	Sheets and plates	62	Organic
23	Conducting base	63	Inorganic nitrogen containing
24	Perforated or foraminous	64 R	Metals
25	Cylinders, rolls or hollow articles	64 T	Titanium, zirconium, hafnium
26	Internal coating	65	Beryllium
27	Sheets, webs, wires, filaments	66	Lead or zinc
28	Of indeterminate length	67	Aluminum
	Combined	68	Alkali-forming
29	With base treatment	69	Alkaline earth metals
30	Non-conducting base	70	Magnesium
31	Waterproofing	71	Alloys
32.1	Cleaning or etching	72	...From aqueous bath
33	Aluminum base	73 R	Organic compounds
34	Ferrous base	73 A	Hydrogenation
34.5	Semiconductor		Of nitrilo alkene/alkyne unsaturation
35.1	With treatment of the coating	74	Of nitrogenous radicals
36	Brightening and burnishing	75	Of carbonylic radicals
37.1	Heat treatment	76	Acyclic
37.3	Coating includes tin	77	Production of alcohols
37.6	Nonmetal electrolytic coating	78	Oxidation
38.1	With other coating methods	79	Of acyclic compounds
38.3	Anodic layer	80	Hydrocarbons
38.4	Nonelectrolytic metal layer with subsequent electrodeposition	81	Halogenation
38.5	Electrolytic layer with subsequent, nonelectrolytic metal layer	82	Inorganic compounds
38.6	Ceramic layer	83	Per-compounds
38.7	Resinous layer	84	Peroxides
39	...From fused bath	85	Hydrogen peroxide
	...From aqueous bath	86	Perborates
40	With multiple layers	87	Metallic salts
41	Chromium layer	88	Carbonates
42	Anodic layer or film	89	Of lead
43.1	Alloys	90	Chromium containing
44.2	Zinc is basic constituent	91	Phosphorus containing
44.3	Gold is basic constituent	92	Nitrogen containing
44.4	Lead, tin or germanium is basic constituent	93	Sulfur containing
44.5	Group VIII metal is basic constituent	94	Sulfates
44.6	Platinum group metal containing	95	Halogen containing
44.7	Phosphorus containing	96	Oxyhalogen
44	Copper containing	97	Metallic oxides and hydroxides
45.1	With single metal	98	Of chromium
45.5	Group VII transition metal	99	Of alkali-forming metals
46 R	Precious metals	100	Mercury cathode
46 G	Gold	101	Of alkaline earth metals
47	Platinum group metal	102	Non-metallic compounds
		103	Ammonia and ammonium hydroxide
		104	Acid and acid anhydrides
		105 R	Sulfuric
		105 M	Metallic elements
		106	Manganese
			Copper

PROCESSES AND PRODUCTS		
	.Electrolysis	
	..Synthesis	
	...From aqueous bath	
	Metallic elements	
	Copper	
107	Halogenating leach	
108	Sulfating leach	
109	Precious metals	
110	Cyaniding leach	
111	Halogenating leach	
112	Iron group metals (i.e., iron, nickel, cobalt)	
113	Halogenating leach	
114	Lead, zinc, cadmium	
115	Reduction at the cathode	
116	Alkali hydroxide leach	
117	Halogenating leach	
118	Zinc	
119	Sulfating leach	
120	Tin	
121	Alkali hydroxide leach	
122	Halogenating lach	
123	Alloys	
124	Of mercury	
125	With alkali-forming metal	
126	With precious metals	
127	Cyaniding leach	
128	...Nonmetallic elements	
129	...Hydrogen or oxygen	
129.1	..Erosion of a workpiece for shape or surface change; e.g., etching, polishing, etc.	
129.2	...With measuring, testing or sensing	
129.25	To adjust voltage across or size of tool-workpiece gap	
129.3	...Employing irradiation or workpiece of nonuniform internal electrical characteristics	
129.35	...With preliminary cleaning or shaping of workpiece	
129.4	...Employing internal battery action or simple alternating current	
129.43	...Employing periodic current change	
129.46	...Employing abrading or wiping; e.g., electrochemical grinding, etc.	
129.5	...With defined electrode-workpiece gap or gap maintenance	
129.55	...Sharpening, pointing or aperture making	
129.6	...By local application of electrolyte; e.g., unsupported jet, surface tension, etc	
129.65	...Of masked workpiece	
129.7	...With vibration or defined electrolyte movement or pressure during erosion	
129.75	...Electrolyte composition or with defined electrolyte	
129.8	Less than 50% water	
129.85	More than 20% organic material	
129.9	More than 20% chromium compound or phosphoric acid	
129.9 ⁺	...Containing organic or Cr or P or Cyan compound	
130	..Material treatment	
131	...Organic materials	
132	...Fibrous	
133	Bleaching	
134	Dyeing	
135	Hides or skins	
136	...Hydrocarbon oils	
138	...Sugar	
140	...Metals and metallic alloys	
141.5	Removing foreign materials, e.g., cleaning, etc.	
144	By internal battery action	
144.5	With current change in workpiece or solid-workpiece moving contact	
145 R	Nonelemental material from ferrous metals	
145 F	Fused bath	
146	Entire identifiable elemental layer or portion; e.g., stripping, etc.	
147	...Object protection	
148	Internal battery action	
149	...Water, sewage and other waste waters	
150	...Internal battery action	
151	...Diaphragm	
152	...With filtering	
153	...Alkali-forming metal hydroxides	
155	..Electrical, or wave energy in magnetic field	
156	..With discharge	
157.1 R	..Wave energy	
157.1 H	...High energy	
157.1 S	...Sonic or ultrasonic	
158 R	..Organic	
158 HE	...High energy	
158 S	...Sonic or ultrasonic	
158 HA	...Halogenation	
159	...Vitamins	
159.11	...Synthetic resin	
159.12	...With carbohydrate, protein, natural gum or natural resin	
159.13	...Silicon containing resin	
159.14	...Preformed synthetic resin	
159.15	...With unsaturated monomer	
159.16	...Acrylic-type preformed resin	
159.17	...Preformed resin is hydrocarbon or halogenated hydrocarbon	
159.18	...In presence of free S or halogen or nonresin forming S, N or halogen compound	
159.19	Polyol-polycarboxylic acid resin (e.g., alkyd) or polycarbonamide resin (e.g., nylon, polyurethane)	
159.2	Hydrocarbon or halogenated hydrocarbon resin	
159.21	From aldehydes	
159.22	From unsaturated monomers	
159.23	With catalyst	
159.24	Metal or S containing compound catalyst	
160.1	...Carbohydrate, protein, vulcanizable natural gums or natural resin	
161	...Fats, fatty oils, ester-type waxes or higher fatty acids	
162 R	...Hydrocarbons	
162 HE	High energy applications	
162 XN	Oxime or nitroso	
162 SH	Sulfonyl halogenation	
162 S	Sonic	
162 SA	Sulfonic acid	
163 R	Halogenated	
163 BH	Benzene hexachloride	
163 HE	High energy applications	
163 S	Sonic	
164	..Electrostatic field or electrical discharge	
165	..Organic	
166	...Vitamins	
167	...Fats, fatty oils, ester type waxes, or higher fatty acids	
168	...Hydrocarbons	
169	...Halogenated or oxidized	
170	...Gaseous	
171	...Acetylene	
172	...Cracking hydrocarbon oils	
173	..Carbon	
174	..Sulfur-oxygen compounds	
175	..Hydrogen peroxide	
176	..Ozone	
177	..Nitrogen compounds	
178	...Arc or spark discharge	
179	Nitrogen oxides	

JUNE 1985

PROCESSES AND PRODUCTS		192 N	...Ion plating or implant
180.1	..Electrophoresis or electro-osmosis processes	193	APPARATUS
180.2	..Coating or forming of object	194	..Electrolytic
180.3	...Rubber or vulcanizable natural gum used to coat or form	400	..Analysis and testing
180.4	Sheet, web, wire or filament of indeterminate length formed or coated	401	...Fault testing of sensor or component
180.5	...Alternating current	402	...Regeneration or activation
180.6	...Radiation energy (e.g., curing, etc.)	403	...Biological, e.g., microbe, enzyme, antigen, etc.
180.7	...Interior of article	404	...Corrosion
180.8	...Regeneration, or replenishment of coating bath (e.g., ultrafiltration, ion exchange, measuring-adjustment, etc.)	405	...Titration
180.9	...Forming of object	406	...With significant electrical circuitry or nominal computer device
181.1	...Plural coating operations	407	...With significant display or analytical device
181.2	Anodized or aluminum oxide coating	408	...With means for temperature or pressure compensation
181.3	Phosphate conversion coating	409	...With means providing specified-flow condition or flow-path
181.4	...Bath having designated chemical composition (DCC)	410	Solid electrolyte means
181.5	Resultant coating is solely inorganic	411	Three or more electrodes
181.6	Anodic processes only	412	...Three or more electrodes
181.7	Cathodic processes only	413	...Liquid electrode, e.g., Hg, Na, etc.
181.8	..Separation or purification of hydrocarbon oil	414	...Gel electrolyte
181.9	...Aqueous system	415	...Selectively permeable membrane
182.1	..At least two different electrophoretic or electro-osmotic methods or a combination of electrophoretic and electro-osmotic methods used, together or sequentially (other than merely combination of anion selective and cation selective)	416	...Ion-sensitive electrode
182.2	..Inorganic siliceous or calcareous material prepared, treated or separated (e.g., clay, earth, asbestos, glass, etc.)	417	Liquid ion-exchanger
182.3	..Barrier separation (e.g., membrane, filter paper, etc.)	418	Organic membrane
182.4	...Ion selective (i.e., distinguishes between different charges)	419	Inorganic membrane
182.5	Sea water, brine or sodium chloride prepared, treated or used	420	Glass ion-selective membrane
182.6	Polypeptide or amino acid prepared, separated or treated (e.g., protein, milk, whey, blood, etc.)	421	...Solid electrolyte
182.7	..Absorbent strip electrophoresis (e.g., cellulose acetate or paper strip electrophoresis, etc.)	422	...Liquid sample sensor
182.8	..Gel electrophoresis	423	With fugitive protective element
182.9	...Isoelectric focusing (pH variation)	424	Gas sample sensor
183.1	..Dielectrophoresis (nonuniform electric field)	425	With impressed current means
183.2	..Isoelectric focusing (pH variation)	426	Planar electrode surface
183.3	..Isotachophoresis (Displacement electrophoresis) or measurement of ion or particle mobility	427	With gas reference material
186	..Electrical separation or purification of liquids	428	With protective element
188	..Hydrocarbon oils	429	Protective element is a layer
189	...With addition of dielectric fluid	430	...Moisture absorbing electrolyte
190	...With addition of water or other modifying agent	431	...Gas sensing electrode
191	...Modified alternating current waves	432	...With gas diffusion electrode
192 R	..Coating or forming by cathode sputtering	433	...Measuring carbon or pH
192 C	...Specified coating material	434	...Involving plating, coating or stripping
192 SP	...Special property	435	...Standard reference electrode
192 F	Film resistor	196	..Object protection
192 S	Semi or super conductor	197	...Internal battery
192 M	Ferro magnetic or electric	198	..With movable electrode means
192 P	Optical or photo active	199	...Work conveyer
192 D	Insulator or dielectric	200	Rotary
192 EC	...With significant sputter etch step	201	With base treatment
192 E	...Sputter etching	202	Loose article
		203	Endless
		204	With base treatment
		205	With current control
		206	With current control
		207	...Continuous strip or filament electrode
		208	With base treatment
		209	Stripping
		210	Mechanical working
		211	Heat treatment means
		212	With current control
		213	...Rotary
		214	...Barrels and rotary receptacles
		215	Swinging or tilting receptacles
		216	With base treatment
		217	Stripping
		218	Mechanical working
		219	With current control
		220	...Liquid electrode
		221	...With electrode recirculation means
		222	...With oscillator, reciprocator or agitator
		223	...Electrode oscillator, reciprocator or agitator
		224 R	With current control
			...Localized area applicators

	APPARATUS	290 F	Dielectric film-forming metal base, insoluble conductive coating
	..Electrolytic		
	...With movable electrode means		
	...Localized area applicators	291	Composition
224 M	Electrochemical machining	292	Metallic
225	...Electrode feeding or withdrawal means	293	Alloys
226	...With base treatment	294	Carbon containing
227	..Cells with base treatment means	295	...Diaphragms
228	..Cells with current control means	296	Organic
229	...With fluid pressure, flow or level intercontrol	297 R	...Electrode supports and work holders
		297 M	Workpiece held by magnetism or suction
230	Gaseous fluid		
231	...Auxiliary electrode	297 W	Workpiece rack
232	..Cells with electrolyte treatment means	298	..Cathode sputtering
233	...Leacher, dissolver or extractor	299 R	..Electrophoretic or electro-osmotic
234	...Recirculation	299 EC	...Coating
235	With filter	300 R	..With electrode moving means
236	With heater or cooler	300 EC	Coating
237	...Recirculation	301	..With diaphragm
238	With filter	302	..Electrical separation or purification of liquids
239	...With heater or cooler		
240	With filter	304	..With electrode moving means
241	...With heater or cooler	305	..With current control means
242	..Cells	306	...With fluid pressure, flow or level intercontrol
243 R	...Fused bath		
243 M	Bath current distribution, magnetic field control	307	..With agitator or vibrator
		308	..With heating or cooling means
244	Plural cells		
245	With feeding and/or withdrawal means		
246	Gas feeding		
247	Gas withdrawal	DIG 1	Mist prevention
248	...Internal battery	DIG 2	Addition agents
249	...Filter or loose electrode type	DIG 3	Auxiliary internally generated electrical energy
250	...Liquid electrode	DIG 4	Electrolysis cell combined with fuel cell
251	...Diaphragm type	DIG 5	Magnetic plus electrolytic
252	...Diaphragm type	DIG 6	Unusual non-204 uses of electrolysis
253	Plural cells	DIG 7	Current distribution within the bath
254	Bipolar electrode	DIG 8	AC plus DC
255	With feeding and/or withdrawal means	DIG 9	Wave forms
256	Gas	DIG 10	Simultaneous abrading and plating
257	With feeding and/or withdrawal means	DIG 11	Laser beam used
		DIG 12	Electrochemical machining
258	Gas	DIG 13	Purification and treatment of electroplating baths and plating wastes
259	Basket-type electrode		
260	Concentrically arranged electrodes		
261	With agitator		
262	With heater or cooler		
263	With feeding and/or withdrawal means		
264	And filter		
265	Gas feeding		
266	Gas withdrawal		
267	Plural cells		
268	Bipolar electrode		
269	With feeding and/or withdrawal means		
270	Gas		
271	...Portable		
272	...Concentrically arranged electrodes		
273	...With agitator		
274	...With heater or cooler		
275	...With feeding and/or withdrawal means		
276	And filter		
277	Gas feeding		
278	Gas withdrawal		
279	..Elements		
280	...Electrodes		
281	Electroforming molds or strips plates		
282	With diaphragm		
283	Perforated or foraminous electrode		
284	Perforated or foraminous		
285	Work holder		
286	With electrode supporting means		
287	Work container		
288	Electrodes with lateral extensions		
289	With lateral extensions		
290 R	Laminated or coated		

JUNE 1985

0.5	INFUSION CONTAINING	44 R	DISPLAY TYPE (I.E., CONVERTIBLE TO OR
0.6	FOR GAS		FROM DISPLAY)
0.7	.With gas storing absorbent or solvent	44 B	..Sheet holder
0.8	FOR COIN, E.G., MAT	44 K	..Basket
0.81	.Combined	44.11	..Stock and sample
0.82	.With closing or fastening means	44.12	..With removal facilitating means
0.83	..Multiple pocket or compartment	45	..Terraced or stepped shelves
0.84	..Multiple pocket or compartment	45.11	..Sectional or multiple movable
85	WITH IGNITER FOR TOBACCO CONTENT		compartment type
86	.Combined	45.12	..With rupturable wall portion
87	.Igniter is flint-wick type	45.13	..Cover-controlled or cover-operated
88	..Interrelated ignition and content		display
	access	45.14	..With content supporting and/or
89	..With common access to igniter and		positioning means
	content	45.15	..Slidable or pivotally mounted
90	.Igniter is match	45.16	..Follower or adjustable bottom
91	..Inner compartment slides relative to	45.17	..Located on or formed by outwardly
	outer		swingable side wall
92	..Swingable container flap or cover	45.18	..Movable to inclined support position
	provides access to match	45.19	..Supporting bed or platform on
93	...Unitary foldable blank container and		receptacle bottom
	match cover unit	45.2	..With cover convertible to easel or
94	..Attached to or carried by external		receptacle support
	container	45.21	..Folded blank box
95	...Having means to receive cover flap of	45.22	...Multiple blank
	match packet (e.g., tongue and slot	45.23	..Pivoted cover
	connection)	45.24	..With folding easel or receptacle
96	MATCH PACKET, CONTAINER OR HOLDER (E.G.,		support
	MATCH SAFE)	45.25	..Folded blank box
97	.With windguard	45.26	...Support cut from receptacle wall
98	.Striker surface in withdrawal path of	45.27	...Multiple blank
	match	45.28	..With cover convertible to display card
99	..Match comb type	45.29	..Folded blank box
100	..Opposed striker surfaces	45.3	...Multiple blank
101	..Means to secure to person or garment	45.31	..With window or transparent wrapper
102	..With disparate article, article	45.32	..Pie
	receiver or display feature (not ash	45.33	..Transparent wrapper
	tray or tobacco)	45.34	..Cover one or more walls
103	..Match comb type	139	PORTABLE SEGREGATING CARRIER FOR PLURAL
104	..Match comb type		CYLINDRICAL BEVERAGE-TYPE RECEPTACLES
105	..Plural "books"		(E.G., BEER CANS, POP BOTTLES)
106	..With accidental ignition prevention	140	..Noncollapsible carrier with tongue and
	means or arrangement		aperture-type interlock between
107	...Discrete holder		exterior walls
108	...Striker surface guard or shield	141	..Handle struck from top wall
109	...Groove or opposed surfaces	142	..Handle retainer container mutually
110	...Slide or pivot of match comb		coact for grasping receptacles
111	...Nonflap type	143	..Handle means interposed between
112	...Striker surface on outside of cover		receptacles
	flap	144	..Interlocking carriers
113	...Access through tuck-flap aperture	145	..Receptacle chime, or closure cap
114	...At comb back		flange, engaging type (e.g.,
115	...Match-head shield		"six-pack")
116	..Pivotally mounted comb	146	..Having additional retainer for
117	..With integral debris receiver		disparate article
118	..Discrete case for book	147	..Unitary retainer or foldable blank
119	..Attachment means		packaging unit
120	...For ash tray	148	...Inwardly struck tab engages radially
121	..Plural matches grouped in box		extending shoulder of chime or edge
122	..Plural boxes grouped in box		of cap skirt
123	..Gravity feed to access port	149	...Inwardly struck tab engages inner
124	...Convertible from box		cylindrical surface of chime
125	..With debris receiver	150	...Band or strand type
126	..Mechanistic means to raise content	151	...Unitary retainer grips chime
127	..With means to support or attach box		perimetrically
128	...Convertible from box	152	...Slots spaced along fold line from
129	...With means to expose match		retaining apertures
130	...Including debris receiver	153	Only one end of retained receptacles
131	..With discrete case for box		engaged
132	...Including debris receiver	154	Chimes at both ends of retained
133	..With debris receiver		receptacle held in slots
134	..With support or attachment means (for	155	Sleeve-type container with end walls
	loose matches)	156	...Retaining flap includes periphery of
135	..With debris receiver		blank
136	..With debris receiver	157	Flap projects between rows of
137	..With separate striker member		receptacles
138	..Magazine supply	158	...Rim of aperture in horizontal wall
			engages chime

189

BEST COPY AVAILABLE

PORTABLE SEGREGATING CARRIER FOR PLURAL	206	.For fastener
CYLINDRICAL BEVERAGE-TYPE RECEPTACLES	207	.For tool or appliance
(E.G., BEER CANS, POP BOTTLES)	208	..Razor
..Receptacle chime, or closure cap	209	..Brush
flange, engaging type (e.g.,	209.1	...Transverse bristle
"six-pack")	210	..Body treatment
159 ..Clip-type retainer interlocks with	211	.For spark plug
chimes of juxtaposed receptacles	212	.For thermometer
160 ..Spacer abuts side and chimes of	213	.For apparel
receptacles	213.1	..Gas medium
161 ..Finger-hole carrier means	214	FOR PLURAL STATIONERY IMPLEMENTS
162 .Pendent from handle	215	FOR STATIONERY OR CARBON PAPER
163 ..Handle bodily shiftable vertically	551	FOR PASTRY WEDGE, PER SE; E.G., PIE
164 ...With hooked end		SLICE
165 ...Panel type	219	FOR MIXING
166 Retractable into carrier	220	..Including free mixing element (e.g.,
167 ..Part movable to receptacle loading		pestle)
position	221	..Means to manipulate without rupture
168 ...Bottle neck engaged in wall aperture	222	..Tear strip or piercer
169 ...Retained in carrying position by	216	COMBINED OR CONVERTIBLE
handle	217	..Including drinking vessel
170 ..Collapsible	218	..Collapsible
171 ...Having anti-collapse latch	223	..Assemblage or kit
172 Involving middle wall	541	..Camp or lunch type
173 Interlock with bottom	550	..With external vent
174 ...Individual receptacle positioning	542	...With specified nonfood
means		characteristic; e.g., mirror
175 Folded blank type	543	...With specified vacuum-type receptacle
176 Multiple blanks	544	...With retainer for vacuum-type
177 Severable blank		receptacle
178 Separate blank forms transverse	545	...With structural, or composition,
wall		insulating feature
179 U-shaped member	546	...Knockdown, or nested, mess gear type
180 Center wall	547	...With canteen container
181 Horizontally and vertically folded	548	...With flaccid wrapper
slide flap forms transverse wall	549	...With specified means to carry or
182 Single center wall folded from		support
bottom	568	..Specified mixture components
183 Confronting center walls folded	569	..Test (e.g., diagnostic or indicator)
from bottom	570	..Therapeutic type (e.g., first aid,
184 Lower margins of center walls		doctor kit)
connected at horizontal fold	571	...Syringe, hypodermic or catheter
185 Center walls connected at	572	...Material with tool
vertically extending fold, one	573	..Signal, lamp or reflector
free end wall	574	..Needlework or dressmaking
186 One center wall folded on	575	..Arts, crafts or sign
horizontal line	576	..Household or office equipment (e.g.,
187 Two center walls folded on		mixer-grinder, recording kit)
horizontal line	577	..Knockdown
188 Doubled center walls folded from	578	..Photography
different end walls	579	..Game, sport or education
189 Side walls folded from unitary	580	..Lock with key
bottom wall	581	..Cosmetic or toilet
190 Transverse wall folded from	582	..Patch (e.g., tire, tank, roof)
center wall only	224	..Draftsman or lettering
191 Transverse wall folded from	225	..Including wound, or rolled, web-like
center wall and side wall		material
192 ..Divisible carrier	226	...With storage means in core
193 ..Folded blank with means for receptacle	227	..Including thread or strip
compartment or spacer	228	..With razor
194 ...With apertured receptacle retaining	229	..With content applicator or dispenser
wall	230	...Fastener and tool
195 Multiple receptacles in single	231	..Including fastener
aperture	232	..Including booklet, leaflet or record
196 With additional receptacle separator		means
197 ...With positioning output	233	..Including tissue "dispensing" means
198 ...Tray with center wall forming a	38	.For pocket or personal use
handle	38.1	..Key case
199 ..Having apertured panel for receptacle	234	..Tools
200 ..Folded blank carrier with applied	235	..With vanity case
handle	236	..With tobacco product
201 ..Rigid grid support and retainer	237	...And paper
202 ...Formed of wire	238	...And cutting or comminuting means
203 ...Molded plastic tray	239	For opening inserted package
77.1 WITH SOAP-HANDLING MEANS	240	For shaving plug
204 WITH MOISTURE ABSORBENT	241	For cutting quid
205 INCLUDING ANCILLARY ARTICLE CONTACTING	242	FOR TOBACCO, PIPE OR CIGARETTE HOLDER
MEDIUM	243	.Hat supported

JUNE 1985

244	FOR TOBACCO, PIPE OR CIGARETTE HOLDER	293	..Resilient or elastic member
245	..Pipe	294	..Aperture
246	..Laminate wall	295	..Tongue struck from panel
247	..With ash holder	296	..Member enters opening in retained article
248	..With anti-tampering means		..Separate self-supporting folded blank
	..With means for holding package or bag at different levels in outer container	297	..Bar, rod or tube
249	..With ejector	298	..Single self-supporting folded blank forms container
250	..Content withdrawal synchronized with cover opening	300	FOR CLOTHES HANGER
251	...In casing with two hinged complementary covers	301	FOR TIME MECHANISM OR ELEMENT
252	..Having biasing means	18	..Watch or clock movement
253	..Plunger type	70	..Watch spring
254	..Having pulling means	19	SACRAMENTAL
255	..Follower type	302	FOR A TIRE VALVE OR PATCH
256	..With segregating means	303	FOR AN ANNULAR ARTICLE
257	..Displaceable, resiliently joined, plural cell elements	304	..Tire
258	..Flexible web	305	FOR AN INSTRUMENT (I.E., MEANS TO MEASURE, TEST OR INDICATE)
259	..Reinforcement or case for single cigarette package	306	..Thermometer
260	..Pouch type	307	FOR SOUND RECORDING (I.E., TEMPLET TYPE)
261	..Casing formed of two hinged complementary covers	308	..Music roll
262	..Released by translation of covers	15	..Phonograph cylinder
263	..Having retaining member	309	..Phonograph disk
264	..With opening or separating means	310	..With spindle-like retainer
265	..With closure	311	..Album type
266	..Biased	312	..Jacket or folder
267	..Sliding	313	...With distinct liner, cushion or sleeve
268	..Integral hinge	314	FOR A MUSICAL ARTICLE
269	..Waterproof	14	..Violin
270	..Telescoping	315.1	FOR A SPORT IMPLEMENT, EXERCISE DEVICE OR GAME
271	..Sheet-formed receptacle	315.2	..For a golf club
272	..Twisted	315.3	..Golf bag
273	..Folded blank	315.4	...Including club head protector or cover
274	..Sealed	315.5	...Including pocket for golfing accessories
275	..Shield	315.6	...Including means for separating club shafts
276	..End cover for cigar or cigarette	315.7	...Including means for maintaining bag in upright position
277	FOR SQUEEZE TUBE (E.G., TOOTH PASTE TUBE)	315.8	...Including side wall stiffener or reinforcement
81	FOR COLOR OR PAINT MATCHING	315.9	..For a ball
1.7	FOR ARTIST EQUIPMENT	315.11	..For hunting or fishing equipment
1.8	..Paint holder (e.g., color box)	316	FOR AN OPTICAL OR PHOTOGRAPHIC MEANS
1.9	..Paint package	317	FOR A WEAPON
83	FOR TEETH	318	FOR A BEARING OR JOURNAL
3	FOR AMMUNITION	319	FOR A MOTOR OR ENGINE
5	FOR EYEGLASS OR SPECTACLE	320	FOR A HOUSEHOLD APPLIANCE
5.1	..Contact lens	321	FOR A BUILDING COMPONENT
6	..Hinged parts	322	..Brick, block or tile
278	FOR APPAREL	323	..Shingle
278.1	..Cedar chest type	324	..Self-sealing type
8	..Hat and headwear	325	..Prehung door or window
9	..Rack, frame or ring	326	FOR FURNITURE OR DRAPE
11	..Fur	327	FOR SPARK PLUG
279	..Means to hold article hanger or support	328	FOR AN ELECTRICAL COMPONENT
280	..Reinforced wall	329	..Engaged in wall aperture
281	..Indicia	330	..Carried on wire or flaccid strip
282	..Means to facilitate article insertion	331	..Secured lead wire
283	..Wall spreader or swing arm attached to panel	332	..Sheet-molded compartments
284	..Article hanger attachment extended from container	333	..Battery package
285	..Removable article hangers retained in spaced relation	334	..Box with content positioner
286	..Bag-type container	335	FOR A VEHICLE
287	...Article completely enclosed	336	FOR SAFETY PIN
287.1	...Foldable to compact use configuration	337	FOR FORKED HAIRPIN
288	..Article hanger integral with container	338	FOR A FASTENER
289	..Article hanger suspended from container or attached support	339	..Surgical or wound type
290	..Plural article hangers	340	..Staple, clip, belt or lacing hook
291	...Removable article hangers retained in spaced relation	341	..Retained in aperture of support member
292	..Article retainer or positioner	342	..Alternately reversed
		343	..Flaccidly or integrally (but not severably) connected
		344	..Between lamina
		345	..Secured to common flaccid member

191

BEST COPY AVAILABLE

JUNE 1985

	FOR A FASTENER	396	..Having core flap
	..Flaccidly or integrally (but not severably) connected	397	..Wrapped, boxed, or secured through roll core
346	..Secured to common flaccid member	398	..Peripheral reel cover
	...Plane of member normal to extent of fastener	399	..Slat type
347	...Held by aperture in member	400	..Single strip encircles reel
348	FOR HOOK, HANGER, EYE, CHAIN, BUTTON, CLASP (I.E., HABERDASHERY TYPE)	401	..Sheet segments
349	FOR A TOOL (E.G., KNIFE, SHAVER)	402	..Reel flange closes cup-like container
350	..Magnetic holder	53	..With clamp
351	..Powered razor	54	..Centrally attached
352	..Razor blade	55	..Layer retained
353	..Folded blank or wrapper	403	..Complementary bodies
354	..Plural blades	404	..Quick release
355	...With blade removal means	405	...Central connection
356	Providing for razor coaction	406	Resilient retainer
357	Mid-blade access for finger	407	..Tubular housing with attached end wall
358	Alternate direction feeding	408	..With content positioner
359	Plus container for discarded blade	409	..With pay-out aperture
360	Follower function for discard	410	..Flaccid wrapper
361	..Brush (e.g., swab, sponge)	411	..Adhesive tape
362	..Plural	412	..Interleaved roll components
362.1	...Transverse bristle	413	..With end protector
362.2	...Transverse bristle	414	..Circumferential flange type
362.3	...Projecting handle	415	..Core secured
15.2	..Closure supported	416	...Opposite end protectors to same core
15.3	...Projecting handle	417	..Batt
362.4	..Folded blank	68	FOR AN INCANDESCENT MANTLE
363	..Body treatment (i.e., surgical, but not cosmetic)	418	FOR A FILAMENT OR SPACE DISCHARGE BULB OR TUBE
364	..Syringe (e.g., enema or catheter per se)	419	..Plural
365	...Hypodermic or needle per se	420	..Set
366	...Plural	421	..Axially aligned
367	..Vaccine point	422	..Allochiral arrangement
368	..Dental	423	FOR A CUT (OR ARTIFICIAL) PLANT, FLOWER OR TREE
369	...Plural	424	FOR A BOOK
370	..Plural or diverse	425	FILE FOR PLURAL CARDS OR SHEETS
371	..Desk-clerical, drafting or engineering type	426	FOR STEMWARE
553	..Eating or kitchen type	436	FOR PLURAL TETRAHEDRON RECEPTACLES
372	..Plural	427	FOR PLURAL BEVERAGE-TYPE RECEPTACLES
373	..Diverse	428	..Strap-type handle
374	...Common handle	429	..Container exposes one side or row of retained receptacles
375	...Common handle	430	..Coaxial, abutting receptacles
376	..Wrenches	431	..Noncylindrical receptacles
377	...Inserted type	432	..Shrink-type wrapper
378	...Socket type	433	..Shock protection
379	...Drills or taps	434	..Four-sided wrapper
380	..Needle type (e.g., sewing, knitting and including pins, toothpicks)	435	..Inwardly moving side member
381	...Phonograph "needle"	528	FOR AMPULE, CAPSULE, PELLET OR GRANULE
382	...Carried in aperture of, or pierced through, retainer	529	..Suppository type
383	Plane of retainer normal to extent of "needles"	530	..Single unit container
384	FOR GREASE GUN CHARGE OR CARTRIDGE	531	..Structure for "press-out" of content unit
385	FOR LIPSTICK OR REFILL CARTRIDGE	532	..With rupture means for access
386	WITH PALLET FEATURE	534	..With indicia or indicator
595	..With handling aperture in content	534.1	..Single layer in edge-to-edge array
596	..Specified multiple handling aperture pairs	534.2	..With means for lateral access
597	..Binder wrap for content	535	..Stacked within container
598	..Specified handling aperture	536	..Limited access by component manipulation
599	..Specified pallet legs	537	...Pocket pen type
600	..Knockdown or collapsible type	538	..Compartmented
387	FOR A SOUND TAPE CARTRIDGE OR CASSETTE	539	..Single unit
388	NONSPOOLED FILAMENTARY MATERIAL (E.G., SKEIN)	533	...With limited access via radial face of "pill box"
49	EMBROIDERY, LACE OR RUCHING	540	..Plural loose content
389	FOR ROLL OR REEL	438	FOR BODY TREATMENT ARTICLE OR MATERIAL (I.E., "SURGICAL" OR THERAPEUTIC TYPE)
390	..Concatenated articles	439	..With gas permeable cover
391	..Plural rolls	440	..Bandage, drape or dressing
392	..Yarn	441	..Short strip type
393	..Material extended between rolls	63.3	..L1 atures
394	..Axially aligned rolls	63.5	..Dental
395	..Folded blank	69	FOR RUBBER BAG OR TUBE (E.G., PROPHYLACTIC)
		71	FOR METALLIC LEAF
		442	BALE-TIE PACKAGE

JUNE 1985

443	FOR PLURAL ROD-LIKE ARTICLES	613	...In adhesive zone
444	FOR MAGNETIC DISC ASSEMBLY	614	...Plural
445	FOR PLURAL DISC-LIKE ARTICLES (E.G., BOTTLE CAPS)	615	...With additional tear means
554	PLURAL PAPER BAGS, I.E., STACK OR PACK	616	..With cord, string or wire
446	FOR CYLINDER	617	...Along seam or fold
447	FOR TACKY MATERIAL (E.G., FLY PAPER)	618	Bag or envelope type
448	FOR CURVED PANEL (E.G., CURVED AUTO GLASS)	619	Including content lift or draw-out arrangement
449	FOR PLATE OR SHEET	620	..Along weakened line
555	..With access means for manual content removal, e.g., desk tray	621	...Forms reusable closure
556	..With follower	622	Tearing plural verlying flaps
450	.Book-type cover with attached retainer	623	Encompassing receptacle
451	.Bound or clamped package	624	Includes three walls
452	..Threaded clamping member	625	Includes two walls
453	.Corner or edge protector	626	Limited to one wall
454	.Fragile or sensitive (e.g., glass mirror)	627	...Encompasses receptacle
455	..Photo film or plate	628	...With finger accommodation means
456	..Specimen or photo slide	629	...Adjacent adhesive seam
457	WITH ORNAMENTATION OR SIMULATION	630	...Tearable member overlies weakened line
458	.Simulates wearing of article	631	..Along an adhesive seam
459	WITH INDICIA OR INDICATOR	632	...Bag or envelope type
460	ARTICLE ADHESIVELY SECURED TO SUPPORT	633	...With pull tab
461	ARTICLE HOUSING ATTACHED TO PANEL	634	..Frangible wall portion
462	.Housing projects from panel aperture	491	FOLDED BLANK
463	..Projecting from both sides of panel	492	.Article folded with blank
464	.Tongue and slot-type attachment	493	RETAINER ENTERS OPENING IN ARTICLE
465	..Housing flanges held in parallel slots in panel	494	FOR FOLDED SHEET-LIKE ARTICLE
466	.Bag-type housing	495	SUPPORT PANEL HAVING ARTICLE PINNED OR WRAPPED THEREON
467	.Movable or detachable housing closure	37	FOR POCKET OR PERSONAL USE
468	..Sliding	37.1	.For a key
469	..Frangible	37.2	..Including external element for ejecting key
470	..Hinged	37.3	..Key frictionally retained in container
471	.Housing contoured to retain article	37.4	..Compartmented
472	BOOK-TYPE COVER WITH ATTACHED ARTICLE RETAINER	37.5	..Including key retainer of two elements movable relative to each other and to the container
473	.Diverse retainers for one or more articles	37.6	..Including plural, serially aligned key retainers
474	.Tongue and slot-type cover closure	37.7	...Removable
475	.Content inspection opening in cover	37.8	..Including key retainer for common mounting of plural keys
476	ARTICLE IN TONGUE OR FOLD APERTURE	496	.Debris (e.g., ashes)
477	BASE WITH ATTACHED CLASPING-TYPE ARTICLE RETAINER	39	.Ticket case
478	.Pliant retainer	39.1	..With means to retain stub
479	..Plural loops formed from continuous strip or strand	39.2	...Piercing pin type
480	.Resiliently biased rigid retainer	39.3	..Plural stacks, coils or fan-folded strips
481	.Rigid loop-type retainer	39.4	..With ejector mechanism
482	.Tongue-type retainer struck from base	39.5	..With opening for ejection by finger
483	.Diverse retainers for one or more articles	39.6	...Pull type
484	LAMINATE SHEET PACKET	39.7	..Folded card or folded sheet content
484.1	.With gas permeable cover	39.8	..Coiled strip or fan-folded strip content
484.2	.Cover of plural lamina	1.5	WITH STRUCTURAL LOCKING MODIFICATION
485	ARTICLE HELD IN APERTURES OF OPPOSED WALLS	497	SHRINK FILM PACKAGE (E.G., BY HEAT OR VACUUM)
486	ARTICLE HELD IN APERTURE IN BASE	499	NESTING OR VERTICAL STACKING WITHIN CONTAINER OR WITHIN RETAINER
487	.Tongue and slot-type base sample connection	500	.Lamp shades, globes, reflectors
488	.Supplementary retainer	501	DIFFERENT RECEPTACLES WITH MEANS FOR STACKING
489	..Sheet type	502	.Cup and saucer type
490	.Peripheral aperture	503	STRUCTURAL FEATURES FOR VERTICAL STACKING, I.E., SIMILAR RECEPTACLES
601	WITH TEAR, CUT, OR BREAK MEANS	504	.Having specified means for lateral stacking
602	.Divisible or separate container type	505	.Having specified means for nesting instead of stacking
603	.With attached cutter or punch	506	..Selectively positioned abutment (e.g., ball or handle)
604	.Tear type	507	..By selective orientation of superposed receptacles
605	..With tear strip	508	.Closure structure specified for stacking
606	...Encompassing receptacle		
607	...Terminating to provide hinge		
608	...Delineated by perforations or score line		
609	With diverse tear means		
610	Bag or envelope type		
611	Perforated only		
612	Score only		

193

BEST COPY AVAILABLE

JUNE 1985

	STRUCTURAL FEATURES FOR VERTICAL	811	WATERPROOF
	STACKING, I.E., SIMILAR RECEPTACLES	812	PACKAGED TOWEL
509	.Having vertical projecting element or	813	ADHESIVE
	recess for interlock	814	SPACE FILLER
510	..Handle type	815	FINGER OPENING
511	..Plural distinct feet or supports type	816	FLEXIBLE CLOSURE (E.G., SLIDING DESK TOP
512	..Corner lug or ear type		TYPE)
513	.Formed from wire or rod of reticulated	817	FOLLOWER
	body fabric	818	MAGNET
514	DIFFERENT RECEPTACLES WITH STRUCTURAL	819	MATERIAL
	FEATURES FOR NESTING	820	SEPARABLE, STRIP-LIKE PLURAL ARTICLES
515	STRUCTURAL FEATURES FOR NESTING	821	STACKING MEMBER
	IDENTICAL RECEPTACLES OR CLOSURES	822	SPECIAL SHAPE
516	.With separate cushion or spacer means	823	COSMETIC, TOILET, POWDER PUFF
517	.Distortable for nesting or components	824	TEAR APERTURES FOR ROLL, STRIP OR SHEET
	of "knockdown" receptacles	825	RECOIL-TYPE RETAINER
518	.Noncircular receptacles (e.g., trays)	828	MEDICINAL CONTENT
519	.Having defined means to limit extent of	829	VACUUM, OR SUCTION, CUP ADJUNCT
	nesting	830	BISCUIT PACKAGE
520	..Defined means at closed end of	831	DETACHABLE COUPON
	receptacle		
557	TRAY TYPE		
558	.Plural lateral array		
559	.With content manipulator means		
560	.With content latch means		
561	.With partition		
562	.With aperture for article		
563	..Specified shape		
564	.With recess or groove for article		
565	.With article retainer		
566	.For jewelry		
567	.For refuse		
521	SHOCK PROTECTION TYPE (E.G., FREE FALL)		
522	.Inflated retainer		
523	.Foam-like retainer		
524	..In situ		
583	.With sling or suspension means		
584	.With surround or flowable or		
	particulate-like material, e.g., "pop		
	corn"		
585	.Stack, pile or nest arrangement		
586	.With distinct corner or edge protector		
587	.With groove-like support		
588	.With article aperture in retainer		
589	..Plural apertures for plural article		
590	..Plural apertures for article		
591	.With yieldable retainer		
592	..Configured for article		
593	..Separator between articles		
594	..Distinct liner		
83.5	FOR BALE		
524.1	WITH SPECIFIED MATERIAL FOR CONTAINER OR		
	CONTENT		
524.2	.Plural different lamina wall		
524.3	.For container lining, coating or		
	impregnate		
524.9	..Plural similar lamina		
524.4	.For content inhibitor or stabilizer		
524.5	.For caustic or deliquescent content		
524.6	.For container		
524.7	..Soluble container		
524.8	EVACUATED		
525	WITH ARTICLE CONTENT		
526	.Plural		
527	MISCELLANEOUS		
	CROSS-REFERENCE ART COLLECTIONS		
800	CHEWING GUM		
802	SHIRRED SAUSAGE CASING		
803	EMERGENCY (E.G., FLARE, FIRST AID,		
	SURVIVAL PACK)		
804	WITH MEANS TO LIFT OR DRAW OUT CONTENT		
805	RUBBER BAND		
806	SUSPENSION		
807	TAMPER PROOF		
809	X-TYPE		
810	ZIPPER (I.E., RECEPTACLE SECUREMENT)		

194

BEST COPY AVAILABLE

JUNE 1985

1	MISCELLANEOUS	60	Centrifugal
2	SPECIAL APPLICATIONS	61	Cylinders, external
3	PRECEDENT PREPARATION OF ITEMS OR	62	Cylinders, internal
	MATERIALS TO FACILITATE SEPARATION	63	Endless belt
3.1	.Sorting special items or sorting by	64	Shaking
	methods or apparatus includible in	65	With agitating or conveying
	subclasses 509 through 707	66	Fluid
3.2	..Condition responsive sensor	67	With rubbing
	controlling preparation	68	Impact
3.3	..Marking or tagging item	69	Reciprocating
4	.Selective differentiation	70	Rotating
5	..Deflocculation and flocculation	127.1	ELECTROSTATIC
7	..Form	127.2	.With heating of particles
8	..Magnetizing and demagnetizing	127.3	.With vibrating trough charging of
9	..Surface		particles
10	TREATMENT SUBSEQUENT	127.4	.Free fall type particle charging
11	WITH HEAT TREATMENT	128	.Attracting and repelling
12	COMBINED OPERATIONS	129	.Attracting
13	.Aqueous suspension, sifting and	130	.Repelling
	stratifying	131	.Stratifying
14	.Mercurial adhesion, sifting and	509	SORTING SPECIAL ITEMS, AND CERTAIN
	stratifying		METHODS AND APPARATUS (E.G., POCKET
15	.Fluid suspension and mercurial		TYPE AND LIGHT RESPONSIVE SORTING,
	suspension or adhesion		ETC.) FOR SORTING ANY ITEMS
16	..Aqueous suspension	510	.Sorting eggs or components thereof
17	.Aqueous suspension and sifting	511	..Radiant energy sensing means controls
18	.Aqueous suspension and stratifying		separating means
19	.Gaseous suspension, sifting and	512	..By weight
	stratifying	513	...Sensing egg weight and controlling
20	.Gaseous suspension and stratifying		separating means in accordance
21	.Gaseous suspension and sifting		therewith
22	..Coincident	514	...Orbiting or rotating carrier
23	...With deposition		responsive to egg weight
24	...Horizontal current	515	Carrier tilted by means (e.g., trip,
25	...With deposition		cam, etc.) adjacent travel path
26	...Inclined current		when depressed to particular
27	...With deposition		elevation
28	...Vertical current	516	...Same eggs successively placed on
29	...With deposition		means (e.g., balance beams, etc.)
30	..Successive		responsive to different weights
31	...With deposition	517	.Sorting lumber, logs, pipes, rails, or
32	...Horizontal current		like items
33	...With deposition	518	..Condition responsive means controls
34	...Inclined current		separating means
35	...With deposition	519	...Relatively movable calipers closed
36	...Vertical current		against item
37	...With deposition	520	...Sensor responsive to item contact
38	.Magnetic and sifting	521	..With endless conveyer belt
39	.Magnetic and fluid suspension	522	.Sorting bottles, ampoules, jars,
40	.Magnetic and stratifying		drinking vessels, or like ceramic or
41	.Mercurial suspension and mercurial		glass containers
	adhesion	523	..Condition responsive means controls
42	.Mercurial adhesion or suspension and		separating means
	sifting	524	...Sensing radiant energy reflected,
43	.Mercurial adhesion or suspension and		absorbed, emitted, or obstructed by
	stratifying		item or adjunct (e.g., label, cap,
44	.Sifting and stratifying		etc.) thereof
44.1	..Including sorting of special items or	525	Sizing with visible light beam
	sorting by methods or apparatus	526	Detecting internal flaw (e.g., air
	includible in subclasses 509 through		bubble, crack, etc.) in wall of
	707		item
44.2	..Fluid jet	527	By means of radio frequency
44.3	..Drum-type sifter		radiation
45	ADHESION	528	Detecting flaw in, or absence or
46	.With selective differentiation		misplacement of, label on item
47	..Coating	529	...Sensing position, shape, or presence
48	...Mercurial (i.e., amalgamators)		of closure
49	..Coated surface or mass	530	...Sensor contacts item
50	..Mercurial	531	Gauge
51	...Applying or removing coat	532	Plug
52	...Contact elements	533	Relatively movable calipers closed
53	Agitators		against item
54	Baffles	534	.Sorting paper money
55	Disks and spheres	535	.Sorting cigarettes, cigars, or packages
56	Liners		thereof
57	Percolators	536	..Sensing radiant energy reflected,
58	...Receivers		absorbed, emitted, or obstructed by
59	Rotating		item or adjunct thereof

195

BEST COPY AVAILABLE

JUNE 1985

SORTING SPECIAL ITEMS, AND CERTAIN METHODS AND APPARATUS (E.G., POCKET TYPE AND LIGHT RESPONSIVE SORTING, ETC.) FOR SORTING ANY ITEMS		585	Mirror or prism in optical path
..Sorting cigarettes, cigars, or packages thereof		586	Sizing
537	..Fluid or vacuum sensing means controls separating means	587	Reflected from item
538	..Nonconveying driven means for turning item at separating or inspecting station to facilitate sorting	588	Transmitted through item
539	..Traveling items shifted to form line, or into end or edge alignment, to facilitate inspection or separation	589	X-ray or gamma ray
540	..Traveling item turned to predetermined position	590	Sonic or supersonic energy
541	..Plural orienting means	591	..Sensing by applying fluid or vacuum to item
542	..Reciprocable or pivotable orienting means	592	..Responsive to weight of item
543	..Fluid orienting means	593	...Detecting movement of item support with electrical sensor
544	..Means orienting item moved by gravity	594	Photodetector
545	..Driven orienting means	595	Switch
546	..Signalling, indicating, or display means	596	...Pusher or deflector controls movement of item on separate support
547	..Indicia associated with cards, file folders, or like coded items, or with sorting means therefor (including cards per se with edge coding)	597	..Sensing position, shape, or presence of closure or end wall on container
548	..Operation of apparatus stopped	598	..Sensing contour of item having no missing parts
549	..Signal lamp or audible alarm	599	..Sorting items according to susceptibility to deform (e.g., malleability, hardness, compressibility, etc.), rupture, or vibrate
550	..Indicating scale	600	..Sensor contacts item
551	..Item counter	601	...Gauge
552	..Condition responsive means controls separating means	602	Relatively movable calipers closed against item
553	..Cards or sheets separated by rotatable suction drum	603	Sheet gauging
554	..Sorting cards or sheets coded by perforations	604	Sensor generates electrical signal
555	..Diverse	605	Items separated into at least three classes
556	..Diverse electrical tests	606	..Separating means
557	..Including noncondition-responsive separating means	607	..Corn silk separator
558	...At single station	608	..Sorting items according to edge coding
559	..Means (e.g., information storing device, timer, delaying relay, etc.) delaying actuation of separating means	609	...Magnet attracts or repels item
560	...Mechanical	610	...Keyboard control
561	Rotatable pin carrier	611	...Cards, file folders, or like items sorted by means of necked-down notch thereon
562	...Magnetic	612	...Cards, file folders, or like items alternatively having notch or hole at particular location thereon
563	Electrical	613	..Sorting cards, file folders, or like items having coded sorting holes
564	Electronic	614	..Hand supported implements
565	Shift register	615	..Brush, flail, or rake used other than as one of opposed pair of gauge elements to separate, or to facilitate separation of, items
566	Controlled by article	616	...Rotatable
567	..Magnetic test sensing property of item	617	..Item gripped between opposed elements
568	..Magnetic core tested	618	...Rollers
569	...Reading indicia	619	..Gauge enters hole in item
570	...Permeability	620	..Gauging passage between orbiting belts
571	..Electrical test sensing property of item	621	..Rotating or orbiting carrier having expandable gauging passage passing items of different size at different points along carrier travel path
572	...Detecting flaw in dielectric	622	...Belt
573	...Electrical component tested	623	With gauging pocket for individual item
574	Resistor or capacitor	624	Pocket formed by rollers, disks, or wheels spaced transversely of belt or by contoured transverse roller, bar, or slat
575	Lamp or battery	625	..Gauge with clearer other than continuous feeder
576	..Sensing radiant energy reflected, absorbed, emitted, or obstructed by item or adjunct thereof	626	...Spacing between gauge elements increased to free item
577	...Infrared, visible light, or ultraviolet	627	...Rotatable or pivotable clearer
578	Ultraviolet	628	...Stationary clearer
579	Laser	629	..Diverse
580	Color detection	630	...Including means supporting items for manual sorting or allowing operator to control item destination
581	Intensity		
582	Measuring ratio of sensed intensities		
583	Reading indicia		
584	On mail		

JUNE 1985

- SORTING SPECIAL ITEMS, AND CERTAIN METHODS AND APPARATUS (E.G., POCKET TYPE AND LIGHT RESPONSIVE SORTING, ETC.) FOR SORTING ANY ITEMS
 ..Separating means
 ..Diverse
 631 ...Including separation effected by items following different trajectories through space
 632 ...Including separation effected by item of particular size passing through gauging passage between separate elements
 633 Stationary elements
 634 ...Including separation effected by item of particular size passing through gauging aperture in wall (e.g., perforated panel, etc.)
 635 ...Including separation effected by different items traveling in different directions while contacting a surface
 636 ..Magnet attracts or repels item
 637 ..Items thrown or falling through space strike surface and only some rebound
 638 ..Items separate by following different trajectories through space
 639 ...Fluid jet changes trajectory of item
 640 ...Items thrown or falling through space strike surface and rebound with different trajectories
 641 ...Takeoff ramp adjustable to different angular positions relative to horizontal plane
 642 ...Thrower
 643 ..Suction
 644 ..Fluid jet
 645 ..Sorting items by weight
 646 ...Orbiting or rotating carrier responsive to item weight
 647 Counterbalance on balance beam moved until beam tilts to item discharging position
 648 Carrier tilted by means (e.g., trip, cam, etc.) adjacent travel path when depressed to particular elevation
 649 ...Same items successively placed on means (e.g., balance beams, etc.) responsive to different weights
 650 ...Item support swings about fixed horizontal axis to discharge at different vertically spaced points
 651 ..Pusher moving item on separate surface
 652 ...Pivotable
 653 ...Reciprocable
 654 ...Rotatable
 655 ..Gravity-type conveyer (e.g., chute, etc.) movable between different discharge positions
 656 ..Movement of items along different paths controlled by passive deflector
 657 ...Deflector movable into and out of path of item
 658 ...Deflector spaced above conveying means to pass item of particular size thereunder
 659 ..Sorting items by size
 660 ...Item of particular size passed through gauging passage between separate elements
 661 Gauging passage between stationary element (e.g., bar, slat, etc.) and orbiting belt
 662 Gauging passage between stationary element (e.g., bar, slat, etc.) and roller
 663 Gauging passage between orbiting belt and roller or wheel
 664 Gauging passage between elements of rotating cage
 665 Gauging passage between elements of orbiting belt
 666 Item moves along curved gauging passage
 667 Gauging passage between rotatable elements
 668 Element adjustable to change width of gauging passage
 669 Helical roller
 670 Items move longitudinally of gauging passage varying in width along length thereof
 671 Spindle or roller having projecting elements spaced circumferentially thereof
 672 Spindle or roller having axially spaced, flat-sided circumferential elements (e.g., flanges, disks, wheels, etc.) projecting therefrom
 673 Cylindrical rollers
 674 Gauging passage between moving elements (e.g., vibrating bars, slats, etc.)
 675 Gauging passage between stationary elements (e.g., bars, slats, etc.)
 676 Element adjustable to change width of gauging passage
 677 Items move longitudinally of elongate elements
 678 With means moving, or regulating movement of, items along elements
 679 Width of gauging passage varies
 680 ...Item of particular size passed through gauging aperture in wall (e.g., perforated panel, etc.)
 681 Aperture in orbiting belt
 682 Aperture in chute or trough
 683 Aperture in circumferential wall of hollow body (e.g., tube, etc.) rotatable about longitudinal axis thereof
 684 ...Item of particular size or shape enters pocket
 685 On orbiting belt
 686 On exterior of drumlike body (e.g., roller, etc.) rotatable about longitudinal axis thereof
 687 On interior of hollow drumlike body (e.g., tube, etc.) rotatable about longitudinal axis thereof
 688 ..Means pierces, or enters preformed hole in, item
 689 ..Items separate by traveling in different directions while contacting drumlike body (e.g., roller, hollow cylinder, etc.) turning about longitudinal axis thereof
 690 ...Items travel circumferentially and longitudinally of turning axis
 691 ..Items separate by traveling in different directions while contacting same inclined surface of moving support
 692 ...Items contact inclined reach of orbiting belt
 693 Item separating reach inclined only in direction of belt movement
 694 ...Translating support

199

BEST COPY AVAILABLE

695	..Items separate by traveling in different directions while contacting same horizontal surface of moving support	176	...Gravity liquid
696	..Items separate by traveling in different directions while contacting same inclined surface of static support	177	Suspension
697	...Helical ramp	178	Water or aqueous solution
698	..Means movable between horizontal item-supporting position and gravity discharge position	179	Metallic (i.e., amalgamators)
699	..Sorting items according to susceptibility to deform (e.g., malleability, hardness, compressibility, etc.), rupture, or vibrate	180	Processes
700	..Sorting items according to roughness or adhesiveness	181	With chemical treatment
701	..Item turned while traveling	182	Bath
702	..Manual sorting	183	Ore
703	...Item supported on table or chute	184	With electric treatment
704	Rotated about vertical axis	185	Bath
705	...Item supported on orbiting or rotating carrier	186	Ore
706	..Specific compartment of receptacle brought into alignment with feed means by operator	187	With heat treatment
707	..Items separated by tipping, rolling, or sliding off support under force of gravity	188	Feeding and distributing
132	FLUID SUSPENSION	189	Submerging
133	..Gaseous	190	Conveyer
134	..Horizontal current	191	Vacuum
135	..With deposition	192	With agitation
136	..Inclined current	193	Baffles
137	..With deposition	194	Agitators
138	..Vertical current	195	Surface
139 R	...With deposition	196	Impact
139 A	With centrifugal feed distributor	197	With rubbing
140	...Expanding	198	Feeding and discharging
141	...With deposition	199	Bath
142	..Grading deposition	200	Receptacles
143	...With deflection	201	Reciprocating
144	...Vortical	202	Chutes and tables
145	..Impetus and countercurrent	203	With agitators
146	...Feeding	204	Rotating
147	...Conveyer	205	Centrifugal
148	Centrifugal	206	With agitators
149	Chute	207	Stationary
150	Disk or cone	208	Chutes and tables
151	Stepped plane	209	With agitators
152	Cylinder internal	210	Reciprocating
153	...Tossers	211	Rotating
154	..Current control	212	Riffles and traps
155	..Liquid	213	...Surface film tension
156	..Horizontal current	214	..Grading deposition
157	..Inclined current	215	...Chronometric
158	..Vertical current	216	...With deflection
159	...With agitation	217	...Vortical
160	...Expanding	218	MAGNETIC
161	...With agitation	219	..Diamagnetic
162	..Floating	220	..Paramagnetic
163	...Buoyant material	221	..Processes
164	Bubbles	222	..Special application
165	Processes	223 R	..Multiple type
166	Preferential	223 A	..Reciprocating magnets
167	With modifying agents	224	..Rotating magnets
168	Preferential	225	...Belt
169	Apparatus	226	...Cylinder external
170	Pneumatic	227	...Vertical axis
171	Oil	228	...Cylinder internal
		229	...Disk
		230	..Stationary magnets
		231	...Cylinder external
		232	...Cylinder internal
		233	..With agitating or conveying
		234	...Magnetic
		235	...Traveling field
		236	...Discharging
		237	...Doffers
		238	...Magnetic
		239	..Feeding
		240	...Fluid suspension
		241	SIFTING
		242	..Combined type
		243	..Special applications
		244	..Distributing
			..Material testing
			..With heating or cooling
			..With weighting
			..Feeding and discharging
			..Conveyers
			..Interconnected
			..Feeding
			..Hoppers

198

JUNE 1985

SIFTING	313	Alined
..Feeding	314	Stepped
..Hoppers	315	Superposed
245 ...With agitators or conveyers	316	With intermediate conveyers
246 ...Cut-offs and valves	317	With dischargers
247 ..Conveyers	318	With pneumatic treatment
248 ...Receptacles	319	Attaching and adjusting
249 Ash pan	320	With agitators and conveyers
250 ...Fluid	321	Pneumatic
251 ..Reversible	322	Reciprocating
252 ..Sifter movement	323	Unattached
253 ..Selective	324	Rotating
254 ..Distributers or spreaders	325	With horizontal and vertical shake
255 ..Discharging	326	Gyratory
256 ..Conveyers and valves	327	Lateral
257 ..Conveyers	328	With impact
258 ..Valves	329	Longitudinal
259 ..Receptacles	330	With impact
260 ..Tilting		With horizontal shake
261 ..Conveying	331	Longitudinal and transverse
262 ..Material forcing	332	Gyratory
263 ..Material positioning	333	Lateral
264 ...Guides	334	Impactive
265 Imperforate sections	335	Pivoted
266 Superposed	336	With impact
267 ..Retarders	337	Sliding
268 ..With liquid treatment	338	With impact
269 ..Reciprocating sifters	339	Swinging
..Rotating sifters	340	With impact
270 ...Drum	341	Longitudinal
271 ...Disk	342	Sliding
272 ...Endless belt	343	With impact
273 ..Stationary sifters	344	Swinging
274 ..Concave and convex sifters	345	With impact
275 ..Reciprocating	346	With vertical shake
276 ...With agitators	347	Impactive
277 Reciprocating	348	Pivoted
278 Rotating	349	With impact
279 ..Rotating	350	Rotating
280 ...With agitators	351	With agitators
281 ..Stationary	352	Stationary
282 ...With reciprocating agitators	353	Multiple
283 ...With rotating agitators	354	Stepped
..Drum sifters	355	Superposed
..Horizontal and inclined	356	Zigzag
284 ...Feeding or discharging		With agitators
285 Peripheral feed	357	Reciprocating
286 Inlets	358	Rotating
287 ...Reciprocating and rotating	359	..Vertical
288 ...Rotating	360	...Reciprocating
289 Multiple	361	...Rotating
290 Concentric	362	..Spiral sifters
291 Nested	363	..Elements
292 Superposed	364	..Actuating
293 With agitators and conveyers	365 R	...Reciprocating
294 Lifters and deflectors	365 A	Cam and linkage
295 Pneumatic	365 B	With cushioning
296 Rotating	365 C	Differential motion
297 Attached	366	...Gyrating
298 Lifters	366.5	Unbalanced weight
299 Lifters and beaters	367	Unbalanced weight
300 ..Stationary	368	...Magnetic
..Vertical	369	...Rotating
301 ...Reciprocating and rotating	370	..Bins and casings
302 ...Reciprocating	371	...Adapters
303 ...Rotating	372	...Closures
304 With agitators	373	...Compartments and receptacles
305 ...Stationary	374	...Household
306 With agitators	375	...Chutes
307 ..Endless belt sifters	376	...Hods
308 ...With agitators	377	...Stoves and furnaces
..Plane sifters	378	...Venting
..Horizontal and inclined	379	...Clearers
309 ...Reciprocating and rotating	380	...Fluid
...Reciprocating	381	...Jarring
310 Distorting	382	...Knockers
311 Multiple	383	...Whips
312 With pneumatic treatment	384	...Pressers

JUNE 1985

	SIFTING	453	Vertical axis
	..Elements		..Stationary bed
	..Clearers		...Permeable
385	...Wipers	454	Constant current
386	Brush	455	Pulsating current
387	Reciprocating	456	Divergent or opposite travel
388	Brush	457	Parallel travel
389	Rotating	458	...Chutes and tables
390	Brush	459	Annular, circular or spiral
391	..Mesh closures	460	With divergent or opposite travel
392	..Dress		...Receptacles
393	...Bars	461	With agitators or conveyers
394	Adjusting	462	Reciprocating
395	Attaching	463	Rotating
396	Reciprocating	464	Horizontal or inclined axis
397	...Perforated sheet	465	Vertical axis
398	Adjusting		..With pneumatic treatment
399	Attaching		..Movable bed
400	...Cords and wires		...Permeable
401	...Woven	466	Constant current
402	Adjusting	467	Divergent or opposite travel
403	Attaching	468	Pulsating current
	..Frames	469	Divergent or opposite travel
404	Adjusting	470	...Belts
405	Attaching	471	...Chutes, tables, and receptacles
406	...Drum	472	Divergent or opposite travel
407	Sectional	473	...Drums
408	...Plane		..Stationary bed
409	..Supports		...Permeable
410	...Axial	474	With constant current
411	...Rim	475	With pulsating current
412	...Framework	476	Divergent or opposite travel
413	Adjustable	477	..Chutes, tables, and receptacles
414	Knockdown	478	..Magnetic
415	...Hangers and standards		..Movable bed
416	...Levelers	479	..Chutes, tables, and receptacles
417	...Manual	480	...Divergent travel
418	Scoop	481	...Opposite travel
419	Shovel	482	...Drums
420	...Portable	483	..Stationary bed
421	...Vehicles	484	..Elements
422	STRATIFIERS	485	..Beds
	..With liquid treatment	486	...Permeable
	..Movable bed	487	...Cleaners
	...Permeable	488	..Feeding and discharging
423	Constant current	489	...Automatic control
424	Divergent or opposite travel	490	..Discharging
425	Pulsating current	491	...Automatic control
426	Divergent or opposite travel	492	...Conveyers
427	Parallel travel	493	...Dividers and skimmers
428	...Belt	494	...Exits
429	Divergent travel	495	With positively operated dischargers
430	Opposite travel	496	Automatic control
431	Reciprocating support	497	..Feeding
432	Divergent travel	498	...Distributing
433	Opposite travel	499	...Regulating
	...Chutes and tables		..Fluid supply
434	Spiral	500	...Liquid
435	Reciprocating-rotating	501	...Circuit
436	Divergent or opposite travel	502	...Pneumatic
437	Reciprocating	503	..Operating mechanism
438	Annular	504	Reciprocating
439	Divergent or opposite travel	505	...Rotating
440	With agitators	506	..Riffles
441	Divergent travel	507	...Overhung
442	Opposite travel	508	..Supports
443	Parallel travel		
444	Rotating		CROSS-REFERENCE ART COLLECTIONS
	..Receptacles		
445	...Reciprocating-rotating	900	SORTING FLAT-TYPE MAIL
446	...Reciprocating	901	FROTH FLOTATION; COPPER
447	...Manual support	902	FROTH FLOTATION; PHOSPHATE
448	With agitators	903	FEEDER CONVEYER HAVING OPPOSED GRIPPERS
449	Reciprocating	904	FEEDER CONVEYER HOLDING ITEM BY MAGNETIC
450	Rotating		ATTRACTION
	...Rotating	905	FEEDER CONVEYER HOLDING ITEM BY SUCTION
451	Horizontal or inclined axis	906	PNEUMATIC OR LIQUID STREAM FEEDING ITEM
452	With agitators or conveyers	907	MAGNETIC FEEDER

BEST COPY AVAILABLE

JUNE 1985

908 ITEM FED BY FREE FALL
909 ITEM HOLDING FEED MAGAZINE INSERTABLE IN
SORTING APPARATUS
910 FEED HOPPER
911 FEED MEANS SUPPORTING OR GUIDING ITEM
MOVING UNDER INFLUENCE OF GRAVITY
912 ENDLESS FEED CONVEYER WITH MEANS FOR
HOLDING EACH ITEM INDIVIDUALLY
913 SCREW FEED CONVEYER
914 DIVERSE SEQUENTIAL FEEDING STEPS
915 CENTRIFUGAL FEEDER
916 RECIPROCATING PUSHER FEEDING ITEM
917 ENDLESS BELT PUSHER FEEDING ITEM
918 SWINGING OR ROTATING PUSHER FEEDING ITEM
919 ROTARY FEED CONVEYER
920 VIBRATORY FEED CONVEYER
921 RECIPROCATING OR OSCILLATING FEED
CONVEYER
922 MISCELLANEOUS FEED CONVEYERS
923 FEED TROUGH INCLUDING AT LEAST ONE
ENDLESS CONVEYER
924 GRAVITY CONVEYER MOVING ITEM FROM
SEPARATING STATION
925 DRIVEN OR FLUID CONVEYER MOVING ITEM
FROM SEPARATING STATION
926 SILVERWARE SORTER
927 COP SORTER
928 CONTAINER CLOSURE SORTER
929 FASTENER SORTER
930 MUNICIPAL SOLID WASTE SORTING
931 MATERIALS OF CONSTRUCTION
932 FLUID APPLIED TO ITEMS
933 ACCUMULATOR RECEIVING SEPARATED ITEM
934 MOVING ITEMS TO SORTING MEANS IN SPACED
RELATION LENGTHWISE OF FEED PATH
935 AMBULANT
936 PLURAL ITEMS TESTED AS GROUP
937 LAUNDRY SORTING
938 ILLUMINATING MEANS FACILITATING VISUAL
INSPECTION
939 VIDEO SCANNING
940 NONCONDITION-RESPONSIVE SORTING BY
CONTOUR
941 ITEM CARRYING BRIDGE RAISABLE TO EXPOSE
DISCHARGE OPENING
942 OPERATOR SELECTS DESTINATION OF ITEM

201

BEST COPY AVAILABLE

JUNE 1985

1	MISCELLANEOUS	69.3	Closure controlling implement
1.3	INOPERATIVE IN HOUSED POSITION		support
1.5	POWER OPERATED	69.4	Including implement supporting base
2	CONVERTIBLE TYPE		for ink receptacle
4	ARTICLE LOCKING	69.5	...Socket support
5	.Velocipede type	69.6	Swingable
6	.Towel service type	69.7	Single plane swing
7	.Horizontal rod type	69.8	...Spring gripping means
8	.Combined lock and clamp	69.9	...Spaced support arms
9	..Unlocked retained key	70	..Rotatable
10	SORTING TYPE	70.1	..Special article support or rack made
11	.Desk file		from sheet material
12	.Bag holder	70.2	..Golf club
13	SPECIAL ARTICLE	70.3	..Cigar, cigarette, or smoking pipe
14	.Ball or egg type	70.4	..Well pipe or pump sucker rod
15	..With discharge mechanism	70.5	..Ski
16	.Towel service type	70.6	..Cutlery (e.g., spoon, fork, knife)
17	.Velocipede type	70.7	..Fishing rod
18	..Wall mounted	70.8	..Tool
19	...Tire or wheel	71	..Receptacle support type
20	..Tire or wheel	72	..Of sheet material
21	...Foldable	73	...Single blank
22	..Stands	74	..Bottle or jar
23	.Tire or wheel type	75	...Wall or window mounted
24	..Stands	76	...With closure
26	.Electric fixture type	77	...Rotatable
27	.Furniture type	78	..Rotatable
28	.Mattress type	79	..Reciprocable support
29	.Shock type	80	...Pivotal support
30	.Hat type	81	..With pivotal mount
31	..Ceiling or seat mounted	82	...With closure operator
32	..Wall mounted	83	...With closure operator
33	..Stands	84	...With closure
34	.Shoe or boot type	85	..Foldable or collapsible
35	..Wall mounted	86	SPECIALLY MOUNTED OR ATTACHED
36	..With shelves	87	..Wall or window
37	..Stands	88	..Tray or receptacle type
38	..Foldable	89	..With article-gripping means
39	.Hand stamp type	90	..Shelf
40	.Phonograph record type	94	..With trackway
41	.Plate type	94.5	...Plural, horizontally spaced
42	.Book support type	95	..Rotatable
43	..Adjustable	96	..Pivoted support
44	.Bolt or card	97	...Vertical and horizontal axis
45	.Paper or textile sheet type	98	...Vertically adjustable
46	..With trackway	99	...Horizontal axis
47	..Pivoted support	100	Bar or arm
48	...Wall mounted	101	Vertically adjustable
49.1	..Stacked Articles	102	...Vertically adjustable
50	..Card or sheet	103	..Vertically adjustable
51	...With follower	104	..Foldable
52	Terraced	105	...Lazy tongs
53	Rotatable	105.1	..Single horizontal rod type
54.1	...With impaling means	105.2	..Curved or angular end type
55	...Terraced pockets	105.3	...Extensible
56	Rotatable	105.4	Screw adjusted
57.1	...With impaling means	105.5	Spring or elastic actuated
58	...Rotatable	105.6	Enclosed spring
59.1	...With impaling means	106	..Of wire
59.2	..Having feature perfecting the	107	..Stovepipe or column
	dispensing of articles	110	..Pivoted
59.3	...Including follower	111	...Horizontal axis
59.4	..With distinct separator positioned	112	..Of wire
	between articles	113	..Suspended type
60.1	.Article includes elongated portion	115	..Rotatable
61	..Shoelace type	116	..Pivoted support
62	..Umbrella or cane	117	..Vertically adjustable
63	...Wall mounted	118	..Knockdown or foldable
64	..Gun	119	..Of wire
65	..Brush and broom	119.01	CLOTHESLINES, ISOLATED SUPPORTS
66	...Suspended	119.02	..Looped lines
67	..Whip	119.03	..Horizontal plane
68	..Cue	119.04	..Pulley support inside of building
69	..Drill or bit	119.05	..Pulley support movable through
69.1	..Writing implement		building opening
69.2	...Ink supply means and implement	119.06	...Swingable support
	support (e.g., penrack), combined	119.07	On vertical axis only
		119.08	On horizontal axis only

	CLOTHESLINES, ISOLATED SUPPORTS	204	..Horizontal rod supported by one or more uprights (e.g., hanger rod, etc.)
	..Looped lines		
	..Pulley support movable through building opening	205	..Including central support (e.g., tree-like, etc.)
119.09	...With loop tighteners	206	..Horizontal rod between uprights
119.1	..Single run line	175	ADJUSTABLE
119.11	..With pin or gripper actuator	207	..Vertically
119.12	..With suspended article support	208	..To plural distinct increments
119.13	..With article gripper	209	..By hoist or pulley
119.14	...Linked lines	180	WITH SCREENS OR CURTAINS
119.15	..Line tighteners	181	OF WIRE
119.16	..Bodily displaceable line	182	OF PIPES OR BARS AND CONNECTORS
119.17	...Vertically translatable	183	ELEMENTS
119.18	..Line covers	184	..Adjustable partitions
120	SERIES SPRING GRIP TYPE		
121	ENDLESS CARRIER TYPE		DIGEST
122	..Horizontal travel		
123	HORIZONTAL ROD TYPE	DIG 1	Magnetic article holder
124	..With article gripping means		
125	SPIKED TYPE		
126	TRAY OR RECEPTACLE TYPE		
127	..With sprinklers		
128	..Terraced trays		
129	..Rotatable		
130	..Foldable		
131	..Rotatable		
132	..Foldable		
133	..Stands		
134	SHELF TYPE		
135	..Of sheet material		
144	..Rotatable		
186	..Knockdown		
187	..Vertically adjustable		
188	..Stacked similar units		
149	..Foldable		
150	..Pivoted shelves		
151	..With roller mounts		
153	..Shelves		
162	WITH TRACKWAY		
163	ROTATABLE		
164	..Horizontal axis		
165	..Pivoted support		
166	..Vertically adjustable		
167	..Foldable		
168	PIVOTED SUPPORT		
169	..Panels or frames		
169.1	..Movable on horizontal axis		
170	..Horizontal axis		
171	..Bar or arm		
172	...Telescopic		
173	..Vertically adjustable		
174	..Vertically adjustable		
189	KNOCKDOWN		
190	..Vertically adjustable		
191	..Plural beams between plural pairs of uprights (e.g., pallet rack, etc.)		
192	...With discrete latch means for locking beams to uprights		
193	..Cantilevered arm		
194	..Stacked similar units		
195	..Foldable or collapsible		
196	..Including central support (e.g., tree-like, etc.)		
197	...Umbrella construction		
198	..Similar planar frames pivotally joined at adjacent edges (e.g., A-frame, etc.)		
199	...Pivoted about vertical axis		
200	..Similar planar frames pivotally joined inwardly of their edges (e.g., crossed frames, etc.)		
201	..Frames movable toward each other in parallel relationship		
202	..Lazy-tong construction		
203	..Including multiple legs pivotally joined at a single zone (e.g., tripod, etc.)		

JUNE 1985

1 R	MISCELLANEOUS	428	..Water or steam
1 A	..Tape cases	429	..Intermediate fluent mass layer (e.g., powder, loose hair, particles, etc.)
1 B	..Tanks	430	..Separate edge-bridge (e.g., "breaker-strip")
1 BC	..Beer cans	431	..Spaced wall-contacting
1 C	..Drain pans	432	...With fastener means
1 E	..Cocktail shakers	433	Pronged bridge
1 H	..Ashtrays, smoking stands	434	..Separate resilient fastener
1 M	..Milk cans	435	..Specified structure for relative layer movement
1 T	..Refuse containers	436	..Articulated layer members
1 S	..Single use	437	..Distinct nonlayer member
1 V	..Vehicle	438	...With corrugated layer
1.5	FREIGHT CONTAINERS	439	...Plural slip elements
2	COAL RECEPTACLES	440	..Corrugated layer
2.1 R	ENVELOPE FOR ELECTRIC LAMP OR SIMILAR DEVICE	441	..Including a corrugated layer
2.1 A	..TV tube	442	..Metallic corrugation
2.2	..With evacuating stem or valve	443	..Coextensively bonded
2.3 R	..Partly of conducting material	444	..Intermediate foamed-in-situ layer
2.3 A	...TV tube	445	..Specified spacer means (nonlayer)
3	HIGH-PRESSURE-GAS HOLDERS	446	..Adjacent an open and/or neck-like portion
3.1	THERMAL MATERIAL	447	...And a closed-end spacer
3.2	OUTLET OR JUNCTION BOX TYPE	448	..Resilient
3.3	..Wall, floor, or panel mounted	449	..Pliant wrapper supported by content
3.4	..Concrete, lath or plaster engaging means	450	..Including a foil layer
3.5	..In opening	451	..Including asbestos filler
3.6	...Opposed engaging means	452	..Including a batt layer
3.7	..With adjustable parts	453	..Coextensively bonded self-sustaining layers
3.8	..With closure	454	..Specified coated or impregnated layer (e.g., dipped, sprayed)
3.9	..With support	455	..External
3.92	..Sectional receptacle	456	..Specified plural coatings
3.94	..Sectional receptacle	457	..Specified nonmetal coating
4 R	SECTIONAL	458	...Compatible with food content
4 A	..Extensions	459	...Hot water boiler-type
4 B	..Enclosed containers of only two similar sections	460	..Including flaccid veneer-like layer (e.g., cloth, paper)
4 E	...Identical halves	461	.. "Plastic" (e.g., polyethylene, rubber, latex, etc.)
4 C	..Stacked or aligned similar sections	462	...Within erected blank
4 D	...Container units	463	..Within erected blank
4 F	..Knockdown	464	..Intermediate self-sustaining panel
5 R	..Barrel or tank type	465	..Including specified barrier aperture fitting (e.g., flange, bung)
5 A	...Tank	466	..Double-walled barrel or drum-type
6	..Folding	467	..Refrigerator cabinet-type
7	..Fastening members	468	..Plural self-sustaining layers
8	..Telescoping	469	..Spaced walls
400	WITH SEPARABLE LINER OR ENCASEMENT	470	LINING PER SE
401	..Skeleton encasement (i.e., outer lattice work)	17.1	LEG OR LAP SUPPORTED
402	..Including shield for liner	17.2	..Bail ear engaging or integral therewith
403	.. "Flexible" or "flaccid" line	17.3	..With pail encircling band or ring
404	..Supported at open terminus (e.g., bag, sack)	18	WALL OR GROUND SUPPORTED
405	..Plate or tray-type (e.g., foil ash-tray, paper dish)	18.1	..Skeleton-type
406	...Plural stack or nest	19	WIRE
407	..With liner supply	23.2	HORIZONTALLY ATTACHED RECEPTACLE SETS
408	..Erected liner for erected container	23.4	..Detachable
409	..With liner lifter mechanism	23.6	..With stacking feature
410	..Nonmetallic liner	23.8	..Integral
411	..Prefilled "can"-type	23.83	ARRANGEMENTS OF PLURAL RECEPTACLES
412	... "Hot", "cold", "insulated" chest-type	23.86	..At least one combined or convertible COMPARTMENTED
413	...With specified liner retainer	20	..Intercommunicable
414	FILAMENTARY WOUND BARRIER STRUCTURE	20.5	..Cell
415	MULTILAYER BARRIER STRUCTURE	21	..By partition
416	..Folded single blank-type	22	..Movable to vary capacity
417	..Including coated layer	22.1	...Releasable partition locking means
418	..Plural lamina blank	22.2	Including aperture, notch or groove
419	..Metallic blank	22.3	Including spring means
420	..Evacuated space between layers	22.4	With guide track means (e.g., rod, channel, flange, etc.)
421	..With intermediate insulating means	22.5	...Spring type
422	...Fluent material	22.6	..Receptacle in cover
423	...Plus distinct reflector means	23	CLOSURES
424	..With intermediate reflector means	200	..Thermal releaser or actuator
425	..Layer-space-layer only	201	
426	..Fluid-filled space between layers (fluid other than "dead" air)		
427	..Compartmented dish or tray (e.g., baby server)		

204

BEST COPY AVAILABLE

JUNE 1985

	CLOSURES	259	..Hinged
202	..With condition responsive vent or valve	260	..With closure opening arrangements or means, e.g., opening devices
203	...Responsive to pressure		
204	...In each of plural passages	261	..Opening means comprises explosive charge
205	...Liquid trap or seal		
206	...Manually adjustable	262	..Operator actuates closure in its opening or closing movement, e.g., foot pedal
207	...Rupturable		
208	...Having relatively movable closure and receptacle rim parts	263	...Hinged closure
209	...With flexible, resilient vent closing member	264	Biasing means
210	..Key controlled	265	..Frangible member or portion
211	..Motor driven	266	...About line or point of weakness
212	..Combined or convertible	267	With cutting device
213	..Convex or concave closure conforms to curvature of opening to be closed	268	Non-removable member or portion
214	..With separately applied sealing means for indicating unauthorized closure movement	269	Gripping means attached to or integral with member or portion, e.g., pull tab
215	..With heat insulating insert or captive air space	270	With gripping means, e.g., pull tab
216	..Floating closure	271	Provided with vent
217	..With liquid gasket	272	Rivet connection between pull tab and removable portion integral with pull tab
218	..Sectional, relatively moveable	273	Rivet connection between pull tab and removable portion integral with removable portion
219	..With surface water receiver, e.g., drain	274	Adapted for engagement with special tool, e.g., slotted key
220	..With support for aground closure		With strip or tool guide
221	..With gasket means intermediate closure rim and receptacle	275	Line of weakness extends circumferentially of receptacle mouth
222	...Attached to closure	276	...With cutting, punching, or cutter accommodating means
223	Magnetic means urges gasket towards receptacle		Puncturing tool serves as closure
224	Mechanical means urges gasket towards receptacle	277	Wire, string, or like, e.g., rip cord
225	Fluid filled gasket	278	About seam
226	Resilient foam or stuffed gasket	279	..Released by axial or radial pressure
227	..With vent means	280	...Closure tilts on fulcrum portions or rocker points
228	..Having liquid or semi-liquid gasket	281	Hinged closure
229	..Closure penetrated through intersecting slits	282	..Special tool or tool engaging means
230	..Magnetic	283	...Attached raising or pry-off means
231	..With vacuum breaker or manually operable vent	284	Repositionable about closure periphery
232	..Having inflatable gasket or packing	285	..Closure adaptable for various sizes or openings
233	..Externally adjustable plug or gasket	286	..Removable closure guided in rotary movement, e.g., screw
234	..Closure carried gasket and expander means	287	..Threads formed or altered upon application of closure
235	...Screw actuated	288	..With means to hold closure in a full or partially open position
236	With retainer	289	..Swinging and rotary
237	With wedging expander	290	...Biased
238	...Cam actuated	291	..Quick removal, e.g., bayonet
239	..Fluid pressure	292	...Elliptical closure flange or passage mouth
240	..With seal means biased by internal pressure	293	...With biased gasket or packing
241	..Face plate type	294	...Interrupted threads
242	..With closure for face plate opening	295	...Keyhole slot
243	..External and internal bar or closure	296	...Radially inwardly and outwardly extending interlocking lugs
244	..Closure mounted for swinging, e.g., hinged	297	With anti-friction means
245	..Plural operators	298	...Locking lug engages "L" or crescent-shaped keeper slots
246	..Spring biased operator	299	...Lugs engage cammed keeper
247	..Eccentric operator	300	Biased or resilient lugs
248	..Sectional bar	301	..With valve or vent means
249	..Bar tethered to closure support	302	..With packing or gasket
250	..Integral bar and operator	303	..Warped cover flexed into operative position
251	..Bar and operator removable with closure as a unit	304	..Removable closure retained by resilient distortion of preformed configuration, e.g., detent
252	..Pivotally or slidably mounted semispherical hood-type closure	305	..Interlocking means internal of passage mouth, e.g., stopper-type closure
253	..Closure members having alignable openings	306	..With gasket or packing
254	..Secondary closure within parameter of primary closure	307	
255	..Closures interconnected for common opening movement	308	
256	..Superposed closures for common opening		
257	..Destructible outer closure		
258	..Destructible inner closure		

205

BEST COPY AVAILABLE

JUNE 1985

309	CLOSURES	364	..By application of hardenable material
	..Removable closure retained by ductile	365	...With contents shield
310	type in situ deformation, e.g., crimp	366	..Vent means at closure, closure support
314	..With gasket or packing		junction
	..Crossbar carries closure and serves as	367	..Vent means in closure
315	closure fastener	368	..With reservoir for vent discharge
	..Having means for securing or retaining	369	..Antispattering cover
	closure in its closed position, e.g.,	370	...Screen
	fastening devices	371	..With filter
316	..With internal pressure-condition	372	...Screen
	release	373	..With means to prevent escape of
317	..Tilting handle fastens while pouring		contents through vent
318	..Handle attached	374	...Tortuous passage
319	..Ring type	375	..Tethered closure
320	...For applying radial pressure, e.g.,	376	..Ornamental
	contractable bands encircling	377	..Transparent
	member	378	..Having gasket or packing
321	...Lever operated	379	..With disparate support for displaced
322	..Comprising "U" shaped or bifurcated		closure
	members, e.g., pivoted bails	380	..Having structure to stack or nest when
323	..Elongated members (e.g., leaf spring,		not in use
	radiating arms) acting between face	62	BLANKS
	of closure and opposed abutments or	66	END STRUCTURES
	walls of the container	67	..Body and end seam or joint
324	..Clamps, clips, hooks or latches	68	..Double walled
325	...Screw actuated	69	..Supports
326	...Biased	70	..Integral
327	..Threaded member, e.g., stud, bolt or	70.1	..Skeleton-type
	screw	71	BODY REENFORCING
328	...With retainer	72	..Integral
329	..Mounted for compound movement	72.1	..Skeleton-type
330	..About container carrying bail	73	EDGE REENFORCING
331	..Swinging and sliding	74	..Integral
332	..Multiple plane swing	75	SEAMS OR JOINTS
333	..Swings about multiple pivots	76	..Interfitting parts
334	..Mounted for swinging, e.g., hinged	77	..Three to five walls
335	..With means holding closure in open	78	..Six or more walls
	position	79	..Rolled
336	..About pivot at right angle to plane of	80	..Separate strip
	closure	81 R	..Packing
337	..Hinge members formed integrally with	81 A	...Oil tank roofs and eaves
	closure and closure support	82 R	TRANSPARENT WALL
338	...Complementary hinge elements	82 A	..With lens
	frictionally interlocked	82.5	..Percolator top type
339	...Flexible hinge	83	WALL STRUCTURE
340	...Hinged formed by overlapping	84	..Skeleton frame
	reentrant flanges on closure and	85 R	ATTACHMENTS
	closure support	85 A	..Expanding bell type
341	...Hinge element deformed in situ	85 B	..Expanding; flexible wall or partition
342	...Complementary hinge elements	85 CH	..Cover holders
	interlocked by separate member	85 D	..Hand implement
343	Pintle	85 E	..Handle shield
344	..With gasket or packing	85 F	..Filling fitting
345	..Closure guided in reciprocating	85 H	..Receptacle holders
	movement	85 K	..Bumpers
346	..Having means securing closure against	85 P	..Valve protectors
	movement	85 SP	..Spouts
347	...Cammed keeper	85 S	..Tank systems
348	..Spring biased	85 TC	..Transformer casings
349	..Having antifriction means	85 V	..Single valve
350	..Flexible closure	85 VR	..Vapor recovery (tank system)
351	..Closure encompasses passage mouth	85 VS	..Vapor saving (tank system)
352	..Removable closure retained by friction	86 R	..Filling devices
353	..With closure guiding means	86 AT	...Antitheft
354	..Closure received by upwardly opening	86 NR	...Nonrefillable
	trough at passage mouth	87	..Disinfectant devices
355	..Passage mouth received by downwardly	88 R	..Fire preventing
	opening channel in closure	88 A	...Screens (flame arresters)
356	..Closure flange embraces passage mouth	88 B	...By inert gas
357	...With gasket or packing	89 R	..Frangible or fusible
358	..With gasket or packing	89 A	...Frangible
359	..Removable closure retained by adhesive	89 B	...Fusible
	or fusion means	90	..Scrapers
360	..Closure controls vent in receptacle	90.2	..Drinking, e.g., mustache guards
361	..Sealing or closing means for vent or	90.4	..Splash or spill inhibiting
	filling opening	90.6	..Lip guards
362	..By crimping	91	BAIL EARS
363	..Nonmetallic	92	..Wire

206

BEST COPY AVAILABLE

JUNE 1985

93 FOLLOWERS
94 R HANDLES
94 A ..Integral
94 B ..Multiple container
95 .Wire
96 .Holders

CROSS-REFERENCE ART COLLECTIONS

900 RUPTURE PROOF
901 LIQUIFIED GAS CONTENT (CRYOGENIC)
902 FOAM
903 INSULATING JACKET FOR BEVERAGE CONTAINER

DIGESTS

DIG 1 Beer barrels
DIG 2 Bottle crates
DIG 3 Breaker strips and sealing strips
DIG 4 Bushings
DIG 5 Antidrip
DIG 6 Drains
DIG 7 Flexible tubes
DIG 8 Ice cream cabinets
DIG 9 Insulating materials
DIG 10 Lunch kits
DIG 11 Materials
DIG 12 Molded
DIG 13 Odd-shaped
DIG 14 Plastic
DIG 15 Plastic bottle crates
DIG 16 Pressure indicators
DIG 17 Pressure and temperature locks
DIG 18 Refrigerator linings
DIG 19 Rubber plugs and caps
DIG 20 Safety locking devices
DIG 21 Shields
DIG 22 Seamless
DIG 23 Fiberglass
DIG 24 Tank trucks
DIG 25 U-shaped, sectional
DIG 26 Vanity
DIG 27 Vents
DIG 28 Washtubs
DIG 29 Welded seam
DIG 30 Biodegradable
DIG 31 Sonic seal
DIG 32 Radiator cap
DIG 33 Gasoline tank cap

JUNE 1985

101	PROCESS	159	...Removing of material
102	.With condition responsive, program or timing control	160	By cutting
103	.With measuring, testing, indicating, inspecting or illuminating	161	Producing internal cavity, aperture, or opening
104	..Nondestructive testing	162	Abrading
105	..Using optical viewing means (e.g., microscope)	163	By melting
106	..Using a compliant cushioning medium	164	..Prior to bonding
107	..Using explosive energy	165	...Forming channel, groove, or aperture for reception of filler material
108	..Specific rate of explosive burn or approach of preforms	166	Elongated seam
109	..Critical spacing between preforms	167	Planar intersecting channel walls
110	..Using high frequency vibratory energy (e.g., ultrasonic)	168	Annular seam
111	..With treating other than heating	169	Having U-shaped or curved cross-section
112	..Using dynamic frictional energy	170	...By cutting
113	..Inertia type	171	Producing opposed complementary matching bonding surface
114	..With treating other than heating	172	Abrading
115	..Using only pressure (e.g., cold welding)	173.1	...By deforming
116	..With pretreating of work	173.2	Pressing first work part against second work part
117	..Cold rolling	173.3	Preforming work faying surface
118	..Using bond inhibiting separating material	173.4	Tube or frame member
119	..Repairing, restoring or renewing product for reuse	173.5	Rod, bar, or wire-like object
120	..Mechanically joining metal/nonmetal and bonding to the metal	173.6	Sheet material
121	..Bonding nonmetals with metallic filler	173.7	Continuously feeding sheet material
122	..Metal to nonmetal with separate metallic filler	174	...Forming channel, groove, or aperture
123	..Semiconductor-type nonmetallic material	265	..With concurrent bonding
124	..With treating	175	..Plural diverse bonding
125	..With removing or reshaping of filler material or flash after bonding	176	..Combined
126	..Encasing a rodlike core within a substantially coextensive tube by complete bonding therebetween	177	..Alternative bonding
127	..Thermally induced pressure weld	178	..Plural joints
128	..With mechanical interlock	179	..Of electrical devices (e.g., semiconductors)
129	..By bending planar part to form tube around rodlike core	180.1	...Simultaneous bonding of multiple joints (e.g., dip soldering of printed circuit boards)
130	...Progressively	180.2	Component terminal to substrate surface (i.e., nonpenetrating terminal)
131	..By fitting rodlike core within tube	181	..Honeycomb structure
132	..Joining through filler	182	..Of mechanical article
133	Preplacing solid tubular filler	183	...Heat exchanger structure
134	Applying molten filler from top reservoir	184	...Pressure vessels, tanks, and container-type structures
135	..With supplementary mechanical joining	185	..Noncoextensive lamina to common base in regular pattern
136	..Deforming of work part	186	..Preliminary sealing of joints
137	...Lock seaming	187	..Separate successive bonds at different temperatures
138	..Attaching of bridge or tie member	188	..Including nonmetallic base
139	..Using separate fastener	189	..Using bridge of spacer
140	...Threaded fastener	190	..Of concurrently bonded stacked laminae
141.1	..With shaping	191	..With disassembling of bonded joint (e.g., desoldering)
142	..Corner mitering	192	..Chain link
143	..Of multilayer tube from single web	193	..Diffusion type
144	..And edge joining of one piece blank or strip	194	..Using intermediate diffusion facilitating material
145	...To form helically seamed tube	195	..With incipient melting of bonding surface
146	...Progressively bending and joining	196	..Autogenous fusion
147	Forming indefinite length member	197	..With diffusion of atoms or nuclear particles
148	Sheathing, cable or wire	198	..Chemical reaction produces filler material in situ
149	...Uniform thickness thin blank or strip	199	..With subsequent treating other than heating of bonded parts and/or filler material
150	Elongated seam	200	..Cooling under particular conditions
151	Butt joining	201	..Cleaning
152	...Irregular thick blank or strip	202	...Chemical
153	..Lap joining of parts of nonplanar surfaces	203	..With pretreating other than heating or cooling of work part of filler prior to bonding and any application of filler
154	...For telescoping sleeve	204	..Applying porous or capillary feed material
155	..Subsequent to bonding		
156	...Drawing elongated member through die		
157	...Spreading or expanding work between bond joints (e.g., honeycomb or heat exchanger making, etc.)		
158	...Rolling		

PROCESS		
..With pretreating other than heating or cooling of work part of filler prior to bonding and any application of filler	263.14	..Ferrous metal
205 ..Cleaning	263.15	...Steel
206 ...Chemical	263.16	And nonferrous metal
207 Applying flux	263.17	..Aluminum or magnesium
208 ..Applying preliminary bond facilitating metal coating	263.18	..Copper or nobel metal
209 ...Chemical deposition	263.19	..Refractory metal
210 ...Mechanically secured	263.21	...Titanium or zirconium
211 ..Chemical	264	PROCESSES OF DISASSEMBLING BONDED SURFACES PER SE (E.G., DESOLDERING)
212 ..With clamping or holding	1.1	MEANS TO APPLY VIBRATORY SOLID-STATE BONDING ENERGY (E.G., ULTRASONIC, ETC.) TO WORK
213 ..And unclamping	2	INCLUDING MEANS TO PROVIDE HEAT BY FRICTION BETWEEN RELATIVELY MOVING SURFACES
214 ..With protecting of work or filler or applying flux	2.5	EXPLOSIVE WELDING MEANS
215 ..By confining filler	3.1	MEANS TO BOND BY APPLYING ONLY PRESSURE (E.G., FOR COLD WELDING, ETC.)
216 ...Using backup means	4.1	WITH MEANS TO JUXTAPOSE AND BOND PLURAL WORKPIECES
217 ..Using getter	4.5	..Wire lead bonder
218 ..Using gas, vapor, vacuum, or reactive flame	5.1	..With means to treat workpieces (e.g., cutting, deforming, etc.)
219 ...Gas or vapor	5.5	..Including compliant cushioning medium
220 Reducing gas	5.7	..Strip leading end to trailing end bonder
221 ...Vacuum	6.1	..Plural discrete workpieces
222 ..Using cooling means (e.g., heat sink or barrier)	6.2	..With electrical connection made at joint
223 ..Applying flux	7	WITH MACHINE PART RESPONSIVE TO TEMPLATE OR PATTERN OR TO INDICIA CARRIED BY AUXILIARY RECORD (E.G., TAPE, CARD, ETC.)
224 ...Flux affixed to or incorporated with filler	8	WITH CONTROL MEANS RESPONSIVE TO SENSED CONDITION
225 ..Plural filler applying	9	..Work-responsive (e.g., temperature, orientation of work, etc.)
226 ..Diverse fillers	10	..Presence of work
227 ..Plural heat applying	11	...To control feed of filler
228 ..And applying pressure	12	..Responsive to position of work carrier
229 ..Separate and distinct heating of work and filler	13	WITH MEANS TO CUT OR SEPARATE WORK, FILLER, FLUX, OR PRODUCT
230 ..Diverse heating	14	..Plus means to apply cut filler or cut flux to work
231 ..Including post heating	15.1	WITH MEANS TO DEFORM WORK, FILLER, OR FLUX PORTION BEFORE FUSION
232 ..Including preheating	16	..By a funnel-shaped conduit (e.g., welding bell, etc.)
233 ..Critical pressure	17	..By roller means
234 ..And critical temperature or heating	17.5	..Comprising means forming one-piece blank into a tubular shape
235 ...Roll bonding	17.7	..Helical tubular shape
236 ..Including specific rate of applying	18	COMBINED
237 ..Including particular mode of applying	19	WITH MEANS TO REMOVE, COMPACT OR SHAPE APPLIED FLUX OR FILLER
238 ..Critical temperature or heating	20	..By fluid blast or suction
239 ..Including specific rate of applying	21	..With shield or guide for removed material
240 ..Including particular mode of applying	22	..Including wiper
241 ...By exothermic reaction	23	..Comprising endless wiper
242 ..Including particular mode of applying heat or pressure	24	INCLUDING REPETITIVE IMPACT FUSION-BONDING MEANS
243 ..Pressure	25	INCLUDING APPLICATOR MOVABLE DURING FUSION
244 ..Feeding unfused filler into fusing contact with work part	26	..Including "flying" applicator engaging moving work
245 ..Preplacing solid filler	27	..With lateral oscillation along path of seam
246 ..Particular size or shape	28	..Reciprocatory or oscillatory motion
247 ...Indefinite length	29	..Orbital or plane curvilinear motion
248 ..Applied in powdered or particulate form	30	..Of roller applicator
249 ..Joint interposed	31	...With associated bath of liquid flux or filler
250 ...Butt	32	..Means to move applicator
251 ...Lap	33	INCLUDING MEANS TO APPLY FLUX OR WORK, OR TO SUPPLY FLUX OR FILLER TO APPLICATOR
252 ...Coextensive sheet	34	..With means to skim dross
253 ..Attaching filler to work part		
254 Adherent solid layer or coating (e.g., pretinned)		
255 Mechanically secured		
256 ..Applying or distributing fused filler		
257 ..By gravity		
258 ..By capillary action		
259 ..By immersing in stagnant pool		
260 ..Using pumped stream or jet		
261 ..Using spray		
262 ..With agitating or vibrating (e.g., using ultrasonic energy)		
263.11 ..Using critical metal filler or work part		
263.12 ..Nonmetal or nonmetal with metal film		
263.13 ..Nickel or cobalt		

JUNE 1985

- INCLUDING MEANS TO APPLY FLUX OR WORK,
OR TO SUPPLY FLUX OR FILLER TO
APPLICATOR
- 35 .By brush, wick or pad
36 .By partial or total immersion of work
or applicator into liquid
37 ..Flowing flux or filler (e.g., wave
former, etc.)
38 ..With means to roll or orbit work
portion
39 ..With means to mask or stop work
40 ..Comprising work immersion
41 .Solid flux or solid filler
42 .Gaseous flux
43 .Moving work
44.3 INCLUDING MEANS TO FORCE OR CLAMP WORK
PORTIONS TOGETHER DURING BONDING
44.5 .Comprising tube aligning means
44.7 .Work portion comprises electrical
component
45 INCLUDING MEANS TO MOVE OR GUIDE
APPLICATOR
46 WITH MEANS TO COOL WORK OR PRODUCT
47 WITH MEANS TO HANDLE WORK OR PRODUCT
48 .Including means to rotate cylindrical
work
49.1 .Including means to orient work or
position work portion relative to
another work portion
49.2 ..Means to rotate work and to position
work about a different axis
49.3 ..Pipe joint aligner
49.4 ..Sheet aligner
50 STEAM BACKUP MEANS
51 METALLIC HEAT APPLICATOR (E.G.,
SOLDERING IRON, ETC.)
52 .With means to handle flux or filler
53 ..With means to heat applicator
54 .Tip or head alloy or polymetallic
structure
55 .Adjustable or detachable head or tip
56.1 SPECIALIZED POT
56.2 .Having means to treat flux or filler
56.3 SOLDER FORM
56.5 WITH SIGNAL, INDICATOR, GAUGE, OR STOP
57 MISCELLANEOUS
- CROSS-REFERENCE ART COLLECTIONS
- 58 APPARATUS FOR BONDING BATTERIES (I.E.,
PLURAL CELLS)
59 HEAT SHIELD
60 TUBE END CLOSING
901 PROCESS OF BONDING BATTERIES
902 USING FLAME
903 METAL TO NONMETAL
904 WIRE BONDING

JUNE 1985

- | | | | |
|--------|--|---------|---|
| 1 | MISCELLANEOUS | 19 | Free solid-phase metal containing |
| 522 R | PERFUME | 20 | Carbon, silica, or silicates and solid S, Se, or Te containing |
| 522 A | ..Atypical perfume compositions, not liquid, such as solids, gels and shaped bodies. | 21 | Carbon, silica, or silicates containing |
| 2 | FIRE-EXTINGUISHING | 22 | Graphite or carbon containing |
| 3 | ..Foam or gas phase containing | 23 | With other inorganic components (except water) |
| 4 | ..Gas generative, chemically | 24 | Solid-phase S, Se, or Te containing |
| 5 | ..Dry, combustion type | 25 | ...Inorganic compounds or elements containing (except water) |
| 6 | ..Low temperature chemically interreactive | 26 | ...Free solid-phase metal containing |
| 6.5 | ...Foam-stabilizant or colloid-stabilizant containing | 27 | ...Carbon, silica, or silicates and solids S, Se, or TC containing |
| 7 | ..Carbonates or ammonium salts containing or pyrolytic | 28 | ...Carbon, silica, or silicates containing |
| 8 | ..Volatile or gas charged liquids containing | 29 | Graphite or carbon containing |
| 8.05 | ..Foam-stabilizant or colloid-stabilizant containing | 30 | With other inorganic components (except water) |
| 601 | FIRE RETARDING | 31 | ...Solid-phase S, Se, or Te containing |
| 602 | ..Having disparate function | 32 | ..Soaps, or organic-acid salts containing |
| 603 | ..For living matter | 32.5 | ..Phosphorus-containing - organic-acid salts containing |
| 604 | ..Material physically quantified | 32.7 R | ...S, Se, or Te containing |
| 605 | ..Containing gas | 32.7 E | Phosphosulfurized alcohols, phenols, thio-alcohols and thiophenols |
| 606 | ..Intumescent | 32.7 HC | Phosphosulfurized hydrocarbons |
| 607 | ..For wood or cellulosic material other than textile | 33 | ..Sulpho-organic-acid salts containing |
| 608 | ..For textile | 33.2 | ...With salts or other organic acids |
| 609 | ..For solid synthetic polymer and reactants thereof | 33.3 | With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 610 | ..Dispersion or colloidal system | 33.4 | ...With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 611 | ..For dispersion or colloidal system | 33.6 | ..Salts of organic-acids of other than C, H, and O containing |
| 8.3 | PREVENTING CONTAMINANT DEPOSITS IN PETROLEUM OIL CONDUITS | 34 | ..Ammonia or nitrogen-base organic-acid salts containing |
| 8.5 R | EARTH BORING | 34.7 | ...With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 8.5 A | ..Aqueous or gaseous fluids containing organic and inorganic components | 35 | ..Aluminum or heavy-metal organic-acid salts containing |
| 8.5 B | ..Aqueous or gaseous fluids containing inorganic components | 36 | ...With alkaline-earth or alkali-metal organic-acid salts |
| 8.5 C | ..Aqueous or gaseous fluids containing organic components | 37 | ...With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 8.5 M | ..Non-aqueous liquid (e.g., oil base drilling fluids) | 37.2 | Inorganic components, rubber or compounds of other than C, H, and O |
| 8.5 P | ..Emulsions | 37.5 | Aromatic- or carbocyclic-acid salts containing |
| 8.5 LC | ..Materials for controlling lost circulation | 37.7 | ...Aromatic- or carbocyclic-acid salts containing |
| 8.55 R | WELL TREATING | 38 | ..Alkaline-earth or alkali-metal organic-acid salts containing |
| 8.55 B | ..Cleaning; preventing or removing deposits | 39 | ...Alkaline-earth metal organic-acid salts containing |
| 8.55 C | ..Acidizing or formation destroying | 40 | With alkali-metal organic-acid salts |
| 8.55 D | ..Water flooding and treatment of formation with surfactants | 40.5 | With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 8.55 E | ..Anti-corrosion | 40.7 | Inorganic components, rubber, or compounds of other than C, H, and O |
| 8.57 | LEATHER OR FUR TREATING | 41 | ...Alkali-metal organic-acid salts containing |
| 8.6 | TEXTILE TREATING | 42 | With rubber, solid terpenes or derivatives or other non-hydrocarbons |
| 8.7 | ..Organic sulphony compound containing | 42.1 | Inorganic components, rubber or compounds of other than C, H, and O |
| 8.75 | ..Organic amine or amide containing | | |
| 8.8 | ..Organic amine or amide containing | | |
| 8.9 | ..Ether group containing | | |
| 9 | LUBRICANTS OR SEPARATANTS FOR MOVING SOLID SURFACES AND MISCELLANEOUS MINERAL OIL COMPOSITIONS | | |
| 10 | ..Packages or heterogeneous arrangements | | |
| 11 | ..Lubricating and foreign functions | | |
| 12 | ..Rigid lubricants and bearings containing fluent lubricants | | |
| 12.2 | ..Impregnated | | |
| 12.4 | ..With fibrous components | | |
| 12.6 | ...Organic fibrous components | | |
| 13 | ..With fibrous carriers | | |
| 14 | ..Organic carrier components | | |
| 15 | ..Gas charged | | |
| 16 | ..Solid-phase non-soap-forming inorganic or non-low-fusing components | | |
| 17 | ..Soaps, organic-acid salts or soap-forming components containing | | |
| 18 | ...Inorganic compounds or elements containing (except water) | | |

JUNE 1985

- LUBRICANTS OR SEPARATANTS FOR MOVING
SOLID SURFACES AND MISCELLANEOUS
MINERAL OIL COMPOSITIONS
- 42.4 ..Soaps, or organic-acid salts containing
..With rubber, solid terpenes or
derivatives or other
non-hydrocarbons
- 42.7 ..Metal or base, linked by O, S, Se, or
Te to carbon of organic radical
compounds containing
- 43 ..Rubber, solid terpenes or derivatives
containing
- 45 ..S, Se, or Te, organic compounds or
solutions containing
- 46.3 ..Inorganic components or elements
(except S) or compounds of other
than C, H, O, S, N, and halogen
containing
- 46.4 ...Metals or metal compounds containing
- 46.6 ...Phosphorus or phosphorus compounds
containing
- 46.7 Se, Te, N, Halogen or other than C,
H, O, S, and P containing
- 47 ..Nitrogen compounds containing
- 47.5 ...Oxygen, halogen or other than C, H,
S, and N compounds containing
- 48.2 ..Oxygen compounds containing
- 48.4 ...Halogen or other than C, H, S, and O
compounds containing
- 48.6 ...Carboxyl compounds containing
- 48.8 ..Halogen compounds containing
- 49 ..Aqueous or inorganic components
- 49.3 ..Aqueous
- 49.5 ...Emulsions or colloid dispersions
containing
- 49.6 ..Compounds of other than C, H, O, N, and
halogen containing
- 49.7 ..Metal containing
- 49.8 ..Phosphorus containing
- 49.9 ...Nitrogen, halogen or other than C, H,
O, and P containing
- 50 ..Nitrogen containing
- 51 ..Oxygen halogen or other than C, H, and
N containing
- 51.5 R ...Oxygen containing
- 51.5 A Amine-carboxylic acid or anhydride
reaction products or mixtures
- 52 R ..Oxygen containing
- 52 A ...Polyoxyalkylene compounds
- 54 ..Halogen or other than C, H, and O
containing
- 54.6 ...Carboxyl containing
- 55 ..Artificially oxidized hydrocarbons
containing
- 56 R ..Carboxylic acids or esters containing
- 56 S"Synthetic" ester is lube base or is
present in substantial amounts
- 56 D Maleic, succinic or fumaric acids,
anhydrides or their esters
- 57 ...Carbocyclic or non-aliphatic
compounds containing
- 58 ..Halogen containing
- 60 PHYSICAL SEPARATION AGENTS
- 61 ..Froth-flotation or differential
adherence
- 62 HEAT OR SOUND INSULATING
- 62.2 ELECTROLYTES FOR ELECTRICAL DEVICES
(E.G., RECTIFIER, CONDENSER)
- 62.3 R BARRIER LAYER DEVICE COMPOSITIONS
- 62.3 T ..Thermoelectric
- 62.3 O ..Organic
- 62.3 E ..Free element containing
- 62.3 S ...Selenium or tellurium
- 62.3 GA ..Group III element containing binary
compound, e.g., Ga, As
- 62.3 ZB ..Groups II and V elements containing
binary compound, e.g., zinc, bismuth
- 62.3 ZT ..Groups II and VI elements containing
binary compound, e.g., Zn, Te
- 62.3 V ..Group VI element-containing
- 62.3 BT ...Containing Group IV element and
oxygen, e.g., barium, titanium III
oxide
- 62.3 C ..Binary alloy or carbide, e.g., Al, In,
LiC
- 62.51 MAGNETIC
- 62.52 ..Flaw detection or magnetic clutch
- 62.53 ..With wax, bitumen, resin or gum
- 62.54 ..Synthetic resin
- 62.55 ..Free metal or alloy containing
- 62.56 ..Iron-oxygen compound containing
- 62.57 ..With scandium, yttrium, gallium, rare
earth or actinide
- 62.58 ..With boron, aluminum, thallium or
indium
- 62.59 ..With titanium, zirconium, silicon,
hafnium, germanium or tin
- 62.6 ..With Group I metal
- 62.61 ...Lithium
- 62.62 ..With Group II metal or lead
- 62.63 ...Calcium, barium, strontium or lead
- 62.64 ...Magnesium
- 62.9 PIEZOELECTRIC
- 567 DEFINED LIQUID DIELECTRIC DISPERSED IN
DEFINED WEB OR SHEET
- 570 FLUENT DIELECTRIC
- 571 ..Gaseous or gas-containing
- 572 ..Metal- or insoluble
component-containing
- 573 ..Si-containing
- 574 ..B-, P-, S-, Se-, or Te-containing
- 575 ..N-containing
- 576 ..O in N compound
- 577 ...Nitro or nitroso compound
- 578 ..O-containing
- 579 ..Carboxylic acid ester
- 580 ..Halogen-containing
- 581 ..Halogenated polycyclic
compound-containing
- 67 VAPORIZATION, OR EXPANSION,
REFRIGERATION OR HEAT OR ENERGY
EXCHANGE
- 68 ..With lubricants, or warning,
stabilizing or anti-corrosion agents
or persistent gases
- 69 ..With low-volatile solvent or absorbent
- 70 FROST-PREVENTING, ICE-THAWING,
THERMOSTATIC, THERMOPHILIC, OR
CRYOGENIC
- 71 HEAT-EXCHANGE, LOW-FREEZING OR POUR
POINT, OR HIGH BOILING COMPOSITIONS
- 72 ..With leak-stopping agents
- 73 ..Organic components
- 74 ..Metal compounds or inorganic
components (except water)
- 75 ...Organic compounds of nonmetals other
than C, H, and O
- 76 ...Carboxylic organic compounds
containing
- 77 ..Organic compounds of nonmetals other
than C, H, and O
- 78.1 ...Organic compounds of nonmetals other
than C, H, O and N
- 78.3 Organic Si containing compounds
- 78.5 Organic P containing compounds
- 79 ..Carboxylic organic compounds
containing
- 79.1 ETCHING OR BRIGHTENING COMPOSITIONS
- 79.2 ..Inorganic acid containing
- 79.3 ..Fluorine compound containing
- 79.4 ..With organic material
- 79.5 ..Alkali metal hydroxide containing
- 80 DESCALING AGENT CONTAINING
- 81 ..Deoxidant or free-metal containing
- 82 ..Plant or organic material containing

JUNE 1985

DESCALING AGENT CONTAINING	126	...Hydrocarbon or halohydrocarbon containing
83 .Plant or organic material containing	127	Non-hydrocarbon non-soap organic compound containing
..Tannin, bark, or bark extract containing	128	..Water-insoluble abradant, wax or filler containing
84 ...With inorganic compound or element (except water)	129	...Organic and inorganic type
85 Inorganic matter other than alkali-metal hydroxides and carbonates and water	130	...Organic type
86 ..With inorganic compound or element (except water)	131	...Inorganic type
87 ...Inorganic matter other than alkali-metal hydroxides and carbonates and water	132	..With other organic, plant, or animal matter or compound
88 SWEEPING OR DUST OR PARTICLE ADHERENT	133	..With inorganic compound or element (except alkali-metal hydroxides and carbonates and water)
89.1 DETERGENTS (FOR USE ON SOLID MATERIALS)	134	..Shapes or structures
90 .Packages or heterogeneous arrangements	135	..Water-soluble inorganic B, Si or P compound containing
91 ..Impregnated or coated with detergents	136	..Acidic
92 ..Separate soap containing and non-soap zones	523	..Nitrogen base containing (except protein)
93 ...Wrapped or encased soaps	524	...Heterocyclic
94 ..With chemical bleachant, oxidant, or reductant	525	...Amine or amide
95 ..Oxidant containing	526	Sulfur or phosphorus containing
96 ...Soap (water-soluble fatty acid or rosin) containing	527	Soluble carboxylic acid or salt
97 Water-soluble inorganic B, Si, or P compound containing	528	Quaternary or amine oxide
98 Ammonia, amine, or nitrogen base compound containing (except proteins)	529	Hydroxy
99 ...Water-soluble inorganic B, Si or P compound containing	530	..Organic sulfoxy
100 ...Acidic	531	...Organic sulfate
101 Nitric acid or aqua regia containing	532	Oxy
102 ...Ammonia, amine, or nitrogen base compound containing (except proteins)	533	With acyclic sulfonate
103 ...Alkaline	534	With aromatic sulfonate
104 ...Solvent (physical or chemical) containing	535	...Aliphatic sulfonate
105 ..Reductant containing	536	Unsaturated
106 ..Antiseptic, insecticide, or biocide containing	537	With aromatic sulfonate
107 ..Soap (water soluble fatty acid or rosin) containing	538	Non-oxo carboxylic
108 .Soap (water-soluble fatty acid or rosin) containing	539	...Aromatic sulfonate
109 ..Water-soluble inorganic B, Si, or P compound containing	540	With non-ionic wetting agent or fatty alcohol
110 ...Ammonia, amine, or nitrogen base compound containing (except proteins)	139	..Physical non-water solvent containing
111 Physical non-water solvent containing	140	..Water-insoluble abradant, wax or filler containing
112 Water insoluble abradant, wax or filler containing	141	..Water-soluble cyanides or cyanates containing
113 Water-insoluble abradant, wax or filler containing	142	..Acidic
114 ...Physical non-water solvent containing	143	..Physical non-water solvent containing
115 Water-insoluble abradant, wax or filler containing	144	...Water-insoluble abradant, wax or filler containing
116 ...Water-insoluble abradant, wax or filler containing	145	..Water-insoluble abradant, wax or filler containing
117 ..Ammonia, amine, or nitrogen base compound containing (except proteins)	146	..With corrosion inhibitors
118 ...Physical non-water solvent containing	147	...Compounds of elements other than C, H, O, N, S, Cl, Na, and K containing
119 ...Water-insoluble abradant, wax or filler containing	148	...Organic nitrogen compound containing
120 ...Water-insoluble abradant, wax or filler containing	149	Thio organic compound containing
121 ..Organic sulpho-compound containing	150	Thiazole nucleus containing
122 ...Physical non-water solvent containing	151	...Organic sulphur compound containing
123 ...Water-insoluble abradant, wax or filler containing	541	..Nitrogen base containing (except protein)
124 Organic and inorganic type	542	..Heterocyclic
125 Organic type	543	...Optical bleach
	544	...Amine or amide
	545	...Sulfur or phosphorus containing
	546	...Soluble carboxylic acid or salt
	547	...Quaternary or amine oxide
	548	...Hydroxy
	153	..Physical non-water solvent containing
	154	...Water-insoluble abradant, wax or filler containing
	155	..Water-insoluble abradant, wax or filler containing
	156	..Alkaline
	157	..Gas-generative
	158	..Physical non-water solvent containing
	159	...Water-insoluble abradant, wax or filler containing
	160	..Water-insoluble abradant, wax or filler containing

213

BEST COPY AVAILABLE

JUNE 1985

549	DETERGENTS (FOR USE ON SOLID MATERIALS)	194	HUMIDOSTATIC, WATER REMOVIVE, BINDIVE, OR EMISSIVE
550	.Organic sulfoxy		
551	..Organic sulfate		
552	...Oxy		
553	...With acyclic sulfonate		
554	...With aromatic sulfonate		
555	..Aliphatic sulfonate		
556	...Unsaturated		
557	With aromatic sulfonate		
558	...Non-oxo carboxylic		
559	..Aromatic sulfonate		
	...With non-ionic wetting agent or fatty alcohol		
162	.Physical or chemical non-water solvent containing	478	X-RAY OR NEUTRON SHIELD
163	..Abradant, wax, cellulose ester, inorganic solid or filler containing	500	ELECTRICALLY CONDUCTIVE OR EMISSIVE COMPOSITIONS
164	...With oxygen organic compounds	501.1	.Light sensitive
165	With organic compounds of other than C, H, and O	502	.Elemental carbon containing
166	With hydrocarbon solvents	503	..With free metal
167	With hydrocarbon solvents	504	..With carbide
168	Wax or cellulose-ester and abradant, inorganic solid or other filling containing	505	..With radioactive material
169	Wax or cellulose-ester containing	506	..With metal compound
170	..Oxygen organic compound containing	507	...Titanium or zirconium compound
171	...Organic compounds of other than C, H, and O containing	508	..Aluminum compound
172	..Non-hydrocarbon substances containing	509	...Magnesium, alkaline earth metal or rare earth metal compound
173	.Aqueous	510	..With organic component
174	.Shapes or structures	511	...Resin, rubber or derivative thereof containing
174.11	.Perfume containing	512	.Free metal containing
174.12	.Enzyme containing	513	..Iron group metal (Iron, Cobalt, Nickel)
174.13	.Coated or encapsulated particle or liquid containing (other than spray dried detergents)	514	..Noble metal (Gold, Silver, Ruthenium, Rhodium, Palladium, Osmium, Iridium, Platinum)
174.14	.Alkali metal inorganic carbonate containing	515	..Tungsten
174.15	.Organo-silicon compound containing	516	.Carbide containing
174.16	.Organo-phosphorus compound containing	517	.Radioactive material containing
174.17	.Carbohydrate moiety containing	518	.Metal compound containing
174.18	..Carboxyl group containing	519	..Iron group compound
174.19	.Nonpolymeric compound having at least two free carboxyl groups containing	520	..Titanium or zirconium compound
174.21	.Polyoxyalkylene compound containing	521	..Magnesium, alkaline earth metal or rare earth metal compound
174.22	..Two or more polyoxyalkylene compounds containing	492	INCANDESCENT MANTLE COMPOSITIONS
174.23	.Polymer containing	299.01	LIQUID CRYSTAL COMPOSITIONS
174.24	..Carboxylic acid anhydride, free carboxyl group, or salt thereof containing	299.1	.Containing pleochroic dye
174.25	.Water-insoluble inorganic compound containing	299.2	.Containing dopant salt
175	WATER-SOFTENING OR PURIFYING OR SCALE-INHIBITING AGENTS	299.3	.Containing charge-transfer agents
176	.Packages or heterogeneous arrangements	299.4	.Containing nonchiral aligning agents
178	.Deoxidant or free-metal containing	299.5	.Containing nonchiral additive having no specified mesophase
179	.Water-insoluble base-exchange agent containing	299.6	.Containing nonsteryl liquid crystalline compound of specified structure
180	.Plant or organic material containing	299.61	..Including heterocyclic ring
181	..With inorganic matter other than alkali-metal hydroxides and carbonates and water	299.62	..Including fused or bridged rings
181.1	GETTERS OR GAS OR VAPOR GENERATING MATERIALS FOR ELECTRIC LAMPS, ELECTRIC SPACE DISCHARGE DEVICES AND SIMILAR DEVICES	299.63	..Including fully saturated ring
181.2	.Plural getter and/or gas or vapor generating materials	299.64	..Aryl ester of aryl acid having three benzene rings
181.3	.Reactive compositions	299.55	...Benzene rings linked by direct bond
181.4	..Containing magnesium, alkali-metal or alkaline-earth metal or compound thereof	299.66	..Benzene rings linked by direct bond
181.5	.Gaseous getters	299.67	..Phenyl benzoate derivative
181.6	.Metal or metal compound containing	299.68	..Including benzene rings bonded through azo, azoxy, or azomethine linkage
181.7	..Magnesium, alkali-metal or alkaline-earth metal	299.7	.Cholesteric liquid crystal composition containing a sterol derivative
		582	LIGHT TRANSMISSION MODIFYING COMPOSITIONS
		583	.Modification caused by energy other than light
		584	.Inorganic crystalline solid
		585	.Producing polarized light
		586	.Displaying color change
		587	.Infrared
		588	.Ultraviolet
		589	..Organic material
		625	RADIOACTIVE COMPOSITIONS
		626	.Treating radioactively contaminated material

CLASS 502, CATALYST, SOLID SORBENT OR SUPPORT THEREFOR, PRODUCT OR PROCESS OF MAKING. CLASS 502 IS TO BE CONSIDERED AS OCCUPYING THIS POSITION IN THE CLASS 252 SCHEDULE FOR PURPOSES OF CLASSIFICATION OF A COMPOSITION HAVING A DISCLOSED OR CLAIMED FUNCTION OR PROPERTY PROVIDED FOR IN CLASS 252 IN ADDITION TO A CATALYTIC OR SORPTURE USE.

JUNE 1985

- RADIOACTIVE COMPOSITIONS
- 627 ..Treating radioactively contaminated material
 - 628 ..Reprocessing nuclear fuels
 - 629 ..By fixation in stable solid media
 - 630 ..Media is glass or ceramic
 - 631 ..Treating gas
 - 632 ..Treating liquid material
 - 632 ...By incineration, calcination, or evaporation
 - 633 ..For disposal by storage in confined space
 - 634 ..In form of sol solution or gel
 - 635 ..Including production of solid particles by chemical reaction
 - 636 ..Nuclear reactor fuel
 - 637 ..Actinide having nonactinide component
 - 638 ...Oxide component
 - 639 ...Carbon containing component
 - 640 ...Free metal or metal compound component
 - 641 ..Actinide nitrides only
 - 642 ..Actinide carbides only
 - 643 ..Actinide oxides only
 - 644 ..As a source of radiation or heat
 - 645 ..For tracing, tagging, or testing
 - 646 ..Luminescent
 - 647 ..Laser
 - 301.16 ORGANIC LUMINESCENT MATERIAL CONTAINING COMPOSITIONS
 - 301.17 ..Scintillating or lasing compositions
 - 301.18 ..Heavy metal containing
 - 301.19 ..Inspection penetrant compositions
 - 301.21 ..Optical brightening compositions
 - 301.22 ..Heterocyclic compounds having an intericyclic acyclic methine linkage
 - 301.23 ...Triazines
 - 301.24 ...Thiazoles or oxazoles
 - 301.25 ..Azine containing
 - 301.26 ..Six-membered ring having one hetero-N-atom
 - 301.27 ..Azole containing
 - 301.28 ...Thiazoles or oxazoles
 - 301.29 ...Tri- or -tetrazoles
 - 301.31 ..Five-membered ring having four carbon atoms and one nitrogen atom
 - 301.32 ..Hetero-S-atom or hetero-O-atom containing
 - 301.33 ..With inorganic luminescent material
 - 301.34 ..Natural resin, cellulose or derivatives containing
 - 301.35 ..Synthetic resin containing
 - 301.36 INORGANIC LUMINESCENT COMPOSITIONS WITH ORGANIC NONLUMINESCENT MATERIAL
 - 301.4 R INORGANIC LUMINESCENT COMPOSITIONS
 - 301.4 S ..Sulfur containing
 - 301.4 P ..Phosphorus containing
 - 301.4 F ..Group IV element containing
 - 301.4 H ..Compositions containing halogen, e.g., halides and oxyhalides
 - 301.5 ..Tungsten containing
 - 301.6 R ..Zinc or cadmium containing
 - 301.6 S ...Sulfur containing
 - 301.6 P ...Phosphorus containing
 - 301.6 F ...Group IV element containing
 - 600 RADIATION SENSITIVE
 - 700 CHEMILUMINESCENT
 - 182 CHEMICAL AGENTS OR MATERIALS (EXCEPT MERE WATER BINDIVE OR EMISSIVE)
 - 182.1 ..Having utility as a reactive material in an electrochemical cell, e.g., battery, etc.
 - 184 ..Absorptive, or bindive, and chemically yieldive
 - 185 ..Plumbiferous sulphur bindant or modifiant containing
 - 186.1 ..Oxidative bleachant, oxidant containing or generative
 - 186.2 ..Composition containing two or more solid materials with defined physical dimensions, e.g., surface areas, volumes, etc., or process of producing said composition
 - 186.21 ..Plural oxidants
 - 186.22 ...Contains plural peroxides
 - 186.23 Organic peroxide
 - 186.24 ..Contains elemental material devoid of water
 - 186.25 ..Composition containing a stabilizer or a product in the form of a surface-modified, impregnated, encapsulated, or surface-coated article; or process of producing said composition
 - 186.26 ...Organic peroxide
 - 186.27 ...Inorganic peroxide
 - 186.28 Contains hydrogen peroxide
 - 186.29 With organic material
 - 186.3 Contains perborate
 - 186.31 With organic material
 - 186.32 Contains Group IA metal peroxide
 - 186.33 Contains Group VIIB or Group VIII metal or compound thereof
 - 186.34 ...Contains organohalogen compound as oxidant
 - 186.35 Chloroisocyanurate
 - 186.36 ...Contains free halogen or oxy-halogen acid type
 - 186.37 Contains alkaline earth metal
 - 186.38 ..Contains activator admixed with inorganic peroxide
 - 186.39 ...Contains heterocyclic compound
 - 186.4 ...Oxygen heterocycle
 - 186.41 ...Hydrogen peroxide
 - 186.42 ..Contains organic peroxide
 - 186.43 ..Contains inorganic peroxide
 - 186.44 ..Contains inorganic nitrogen containing compound
 - 187.1 ..Free halogen or oxy-halogen acid type
 - 187.2 ...Oxidant contains halogen other than chlorine
 - 187.21 ...Chlorine dioxide or monoxide
 - 187.22 With elemental chlorine
 - 187.23 ...Chlorite
 - 187.24 ...Hypochlorite
 - 187.25 Alkali metal hypochlorite
 - 187.26 Sodium
 - 187.27 Alkaline earth metal hypochlorite
 - 187.28 Calcium
 - 187.29 With alkali metal compound
 - 187.3 With alkaline earth metal compound
 - 187.31 ...Chlorate or perchlorate
 - 187.32 ...Hypochlorous acid
 - 187.33 ...Oxidant contains N-Cl bond
 - 187.34 ...Chloroisocyanurate
 - 188.1 ..Reductive bleachant, deoxidant, reductant, or generative
 - 188.2 ..Sulfur containing reductant, bleachant, deoxidant, or generative
 - 188.21 ...Sulfite
 - 188.22 Hydrosulfite (dithionite)
 - 188.23 With organic additive
 - 188.24 Contains nitrogen
 - 188.25 ..Hydrogen generating
 - 188.26 ..Hydride containing
 - 188.27 ...Contains Al-H bond
 - 188.28 ..Deoxidant or oxygen scavenging
 - 188.31 ..Chemically interactive components
 - 189 ..CO, S, negative element, or acid, bindant containing
 - 190 ..With absorbents
 - 191 ..Basis-iron containing
 - 192 ..Alkali-metal or alkali-metal compound containing

215

BEST COPY AVAILABLE

JUNE 1985

193	CHEMICAL AGENTS OR MATERIALS (EXCEPT MERE WATER BINDIVE OR EMISSIVE)	342	Carbocyclic or non-aliphatic carboxylic compound containing
302	.Ammonia, alkali or base, bindant containing	343	With non-carboxylic non-amine compounds
302	COLLOIDS AND POTENTIAL COLLOIDS; CHEMICAL PROCESSES OF MAKING AND BREAKING: APPARATUS RELATED THERETO	344	Organic amine, amide or N-base containing
303	.Including separations or comminutions by colloid functions	345	With elements other than C, H, and O
304	.Colloid (polyphase discontinuous dispersion) systems	346	...Vaporizing, heating or cooling
305	..Smokes, fogs, or gaseous primary dispersants	347	...With mechanical treatment
306	..Liquid primary dispersants	348	...With added component
307	...Foams or gaseous primary dispersands	349	...Mechanically
308	...Organic major dispersants only	350	..Gas-generating agent containing
309	...Inorganic major dispersands only	351	..Wetting, emulsifying, dispersing or stabilizing agents
310	...Water as major dispersant only	352	..Organic and inorganic agents containing (except water)
311	...Organic major dispersands only	353	..Organic sulphony compound containing
311.5	Bituminous dispersands	354	...Protein or carboxylic compound containing
312	Oil or liquid dispersands	355	...Organic amine, amide or N-base containing
313.1	Inorganic major dispersands only	356	..Protein or carboxylic compound containing
313.2	Silica	357	..Organic amine, amide, or N-base containing
314	...Dispersive or manipulative operations	358	..Emulsification or liquid dispersant colloidization-inhibiting, emulsion-breaking or liquid dispersant colloids resolving agents
315.01	.Gels, coagulates or dispersands	363.5	SOLIDS WITH SOLUTION OR DISPERSION AIDS
315.1	..Organic	364	SOLVENTS
315.2	...Inorganic material coated, impregnated or surface-modified with organic material	365	ANTI-INGESTIBLE OR DENATURED
315.3	...Carbohydrate or derivative	366	.Alcohol type
315.4	...Carboxylic acid ester, acid or salt thereof	367	SOAPS (ALKALI-METAL SALTS OF WATER-INSOLUBLE FATTY OR ROSIN ACIDS)
315.5	..Metal silicate or clay	368	.Products
315.6	..Silica	369	..Including saponification
315.7	..Alumina	370	..With subsequent operations
318	.Potential dispersants, or dispersands with colloidization inhibitors	372	GASEOUS COMPOSITIONS
319	.Resolving colloids or inhibiting colloidization	373	.Carbon-oxide and hydrogen containing
320	..Liquid primary dispersants	374	.Nitrogen and hydrogen containing
321	...Foams or gaseous primary dispersands	375	..Nitrogen from air or elementary nitrogen only and hydrogen from compounds
322	...Adsorbent or solid surface functioning treating substances	376	...Hydrogen from hydrocarbons
323	Organic and inorganic agents (except water)	377	..From elementary nitrogen and hydrogen only or purification
324	Inorganic agents (except water)	378 R	EXPOLIATED OR INTUMESCED
325	Organic agents	378 P	..Perlite
326	...Added nongaseous dissimilar treating substances	380	PRESERVATIVE AGENTS
327	Added dissimilar solvents, bindants or liquid baths	381	.Anti-caking, separative or protective coatings or zones
328	Resolving aqueous-petroleum or aqueous-hydrocarbon systems	382	..Foams, liquids or fluids
329	Organic and inorganic agents (except water)	383	..Organic and inorganic matter containing
330	Inorganic agents (except water)	384	..Organic compound containing
331	Organic agents	385	..Inorganic compound or element containing
332	Organic sulphony compound containing	386	..Anti-knock or anti-explosion
333	Petroleum-sulphony compound containing	387	..Anti-corrosion
334	Organic amine, amide or N-base containing	388	..Organic compound containing
335	Protein or carboxylic compound containing	389 R	...Components inorganic or other than C, H, O, N, S, and halogen
336	Organic amine, amide or N-base containing	389 A	Phosphorus containing
337	Carbocyclic or non-aliphatic sulphony or carboxylic compound containing	390	...Amine, amide, azo or nitrogen-base radical containing
338	Organic amine, amide or N-base containing	391	Sulphur organic compound containing
339	With non-sulphony non-carboxylic non-amine compounds	392	Oxygen organic compound containing
340	Protein or carboxylic compound containing	393	...Phenol or quinone radical containing
341	Organic amine, amide or N-base containing	394	...Nitrogen organic compound containing
		395	...Sulphur organic compound containing
		396	...Oxygen organic compound containing
		397	..Anti-oxidants or chemical change inhibitors
		398	..Plant or animal matters of unknown compositions

214

BEST COPY AVAILABLE

JUNE 1985

PRESERVATIVE AGENTS

- .Anti-oxidants or chemical change
inhibitors
- 399 ..Organic compound containing
- 400 R ...Components inorganic or other than C,
H, O, N, S, and halogen
- 400 A Phosphorus containing
- 401 ...Amine, amide, azo or nitrogen-base
radical containing
- 402 Sulphur organic compound containing
- 403 Oxygen organic compound containing
- 404 ...Phenol or quinone radical containing
- 405 ...Nitrogen organic compound containing
- 406 ...Sulphur organic compound containing
- 407 ...Oxygen organic compound containing
- 408.1 NON-REACTIVE ANALYTICAL, TESTING
INDICATING COMPOSITIONS

CROSS-REFERENCE ART COLLECTIONS

- 950 DOPING AGENT SOURCE MATERIAL
- 951 .For vapor transport
- 960 SURFACE FLAW DETECTING COMPOSITIONS
- 961 STRESS OR CONTACT INDICATORS
- 962 TEMPERATURE OR THERMAL HISTORY
- 963 HUMIDITY OR MOISTURE INDICATORS
- 964 LEAK DETECTION
- 965 RETROSPECTIVE PRODUCT IDENTIFICATION
(E.G., TAGS AND TRACERS, ETC.)

DIGESTS

- DIG 1 Nonionic surface active agents
- DIG 2 Detergents containing polymers (other
than soil suspending polymers)
- DIG 3 Detergents containing film forming
materials
- DIG 4 Sulfoxides in cleaning compositions
- DIG 5 Human skin cleaning compositions
- DIG 6 Biodegradable detergents
- DIG 7 Amphoteric surface active agents
- DIG 8 Paint removers and cleaners
- DIG 9 Azeotropes
- DIG 10 Glass cleaners
- DIG 11 Detergents containing chelating agents
- DIG 12 Detergents containing enzymes
- DIG 13 Shampoos
- DIG 14 Liquid detergents
- DIG 15 Detergents containing soil-suspending
agents
- DIG 16 Detergent bars
- DIG 17 Organo phosphorus detergents
- DIG 18 Activation-platinum
- DIG 19 Detergents for spotting

JUNE 1985

- (1) ICIREPAT system ST, STEROIDS includes all the art from this class, subclasses 239.5-239.57 and 397-397.5 (See STEROIDS MANUAL)
 (2) ICIREPAT system OM, ORGANOMETALLICS includes all the art from this class, subclasses 429-448. (See ORGANOMETALLICS MANUAL)

1

MISCELLANEOUS

In lieu of former subclasses 2.01+ and 709+, see the 520 Series, Classes 520-528.

These Classes are to be considered as an integral part of Class 260; they follow the schedule hierarchy and retain all pertinent definitions and class lines of Class 260.

CLASS 518 FOLLOWS THE SCHEDULE HIERARCHY AS DETERMINED BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR FISHCHER-TROPSCH PROCESSES.

- 96.5 R UREA ADDUCTS
 96.5 C ..Urea only
 96.5 T ..Thiourea only
 97 NATURAL RESINS AND REACTION PRODUCTS
 97.5 ..Tall oil and reaction products thereof
 97.6 ..Separation of constituents of tall oil
 97.7 ..Purification and recovery
 98 ..Sulfur containing
 99 ..Oxidized
 99.5 ..Polymerized
 100 ..Hydrogenated
 101 ..Reaction products with terpenes and/or polycarboxylic anhydrides
 102 ..Reaction products with ammonia, amido or amino compounds
 103 ..Esters of natural resin acids
 104 ..With polyhydric alcohol (e.g., ester gum)
 105 ..Salts of natural resin acids
 106 ..Pyrolytic or heat isomerized products (e.g., rosin oil)
 107 ..Purification, preservation or recovery
 108 ..Resins of pine origin
 109 ...Oleoresin
 110 ...Extraction from cut wood
 111 ...Treatment with immiscible solvents
 112 R PROTEINS AND REACTION PRODUCTS
 112 B ..Hemoglobin compounds
 112 G ..Vegetable glutens
 112 T ..Synthetic thyroprotein and iodine containing proteins
 112.5 R ..Peptides of known chemical structure
 112.5 T ...Thyrocalcitones
 112.5 LH...Luteinizing hormone
 112.5 TR...Thyrotropin hormone
 112.5 S ...Somatostatin
 112.5 E ...Enkephalins or endorphins
 112.7 ..Insulin
 113 ..Heavy metal or aluminum containing
 114 ..Silver
 115 ..Iron
 117 ..Gelatin, glue and reaction products
 118 ..Purification or recovery
 119 ..Casein and reaction products
 120 ..Purification or recovery
 121 ..Albumin and reaction products
 122 ..Purification or recovery
 123 ..Prolamines and reaction products
 123.5 ..Seed proteins
 123.7 ..Scleroproteins

CLASS 530 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR LIGNINS OR REACTION PRODUCTS THEREOF.

CLASS 534 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR NOBLE GASES AND AZO-TYPE COMPOUNDS.

CLASS 536 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR CARBOHYDRATES OR DERIVATIVES THEREOF.

- 239 R HETEROCYCLIC CARBON COMPOUNDS CONTAINING A HETERO RING HAVING CHALCOGEN (i.e., O, S, Se or Te) OR NITROGEN AS THE ONLY RING HETERO ATOMS
 239 A ..Nitrogen only hetero atom in ring 4 or less ring members
 239 AA ...Rings of 2 N and 1 C
 239 E ...Rings of 1 N and 2 C (no double bond in ring)
 239 EP Phosphorus containing aziridines
 239 EQ Aziridines containing quinone groups
 239 B ..Nitrogen only hetero atom in ring having 7 or more atoms
 239 BA ...3-aza-bicyclo (3.2.2) nonane containing
 239 BB ...One N in hetero ring and having hydrocarbon ring fused to adjacent carbons of hetero ring (e.g., benzazepines)
 239 D Having 2nd hydrocarbon ring fused to 2 different carbons in hetero ring
 239 BC ...2 or more N atoms in hetero ring
 239 HM Homocyclonite
 239 BD Having hydrocarbon ring fused to 2 adjacent C atoms on hetero ring
 239 DD Having 2nd hydrocarbon ring fused to 2 different adjacent carbon atoms in hetero ring
 239 BE ...Containing one or more double bonds in hetero ring
 239 BF ...Containing non-oxo-carbonylic group (or S analogs)
 239.1 ..Penicillins and derivatives
 239.3 R ..Lactams
 239.3 P ...Polycyclic 4 or more rings
 239.3 T ...Polycyclic 3 rings
 239.3 B ...Bicyclic
 239.3 D 1,4 benzo diazepine-ones
 239.3 A ...Processes - prep, recovery, purification mono cyclic lactams
 239.5 ..Cyclopentanohydrophenanthrene nucleus containing (1)
 239.55 R...Hetero-O-containing
 239.55 A...Steroid sapogenins
 239.55 B...Steroid adducts
 239.55 C...Steroid cyclic ketals
 239.55 D...Steroid acetonides
 239.57 ...Lactones
 239.6 ..Para-N-benzenesulfoxy-X-(X=C or N)
 239.65 ...Addition compounds
 239.7 ...Azines
 239.75 ...Pyrimidines
 239.8 ..Six-membered rings containing one hetero-N-atom
 239.9 ..Azoles
 239.95 ...Thiazoles

218

BEST COPY AVAILABLE

HETEROCYCLIC CARBON COMPOUNDS CONTAINING
A HETERO RING HAVING CHALCOGEN (i.e.,
O, S, Se or Te) OR NITROGEN AS THE
ONLY RING HETERO ATOMS

- 242.2 .Phthalocyanines which contain a
six-membered hetero ring having at
least nitrogen as a ring hetero atom
- 243.3 .Compounds containing a hetero ring
having a least seven members
including nitrogen and carbon, and a
six-membered hetero ring having two
or more ring hetero atoms of which at
least one is nitrogen

CLASS 544 IS AN INTEGRAL PART OF CLASS
260 AS SHOWN BY THE POSITION OF THIS
BOX. THIS CLASS PROVIDES FOR SIX-
MEMBERED HETERO RINGS HAVING TWO OR
MORE HETERO ATOMS OF WHICH AT LEAST
ONE IS NITROGEN.

- 244.4 .Compounds containing a hetero ring
having at least seven members
including nitrogen and carbon, and a
six-membered hetero ring consisting
of one nitrogen and five carbons

CLASS 546 IS AN INTEGRAL PART OF CLASS
260 AS SHOWN BY THE POSITION OF THIS
BOX. THIS CLASS PROVIDES FOR
PYRIDINES (INCLUDING HYDROGENATED).

- 245.1 .Compounds containing phthalocyanines
and a five-membered hetero ring
having two or more ring hetero atoms
of which at least one is nitrogen
- 245.2 R .Polycyclo ring system which includes a
four-membered ring consisting of one
nitrogen and three carbons and has
chalcogen double bonded directly
thereto and shares the nitrogen with
an additional ring
- 245.2 T ...Thienamycins
- 245.3 ..The additional ring contains ring
oxygen
- 245.4 .Compounds having chalcogen double
bonded directly to a four-membered
hetero ring consisting of one
nitrogen and three carbons, and
having an additional nitrogen
containing hetero ring
- 245.5 .Compounds containing a hetero ring
having at least seven members
including nitrogen and carbon, and a
five-membered hetero ring having two
or more ring hetero atoms of which at
least one is nitrogen
- 245.6 ..The five-membered hetero ring consists
of two nitrogens and three carbons
- 245.7 .Compounds containing a hetero ring
having at least seven members
including nitrogen and carbon, and a
five-membered hetero ring consisting
of one nitrogen and four carbons
- 245.71 ..Azaporphyrins (including hydrogenated)
- 245.72 ...Phthalocyanines
- 245.73 Hetero ring attached directly or
indirectly to the phthalocyanine
ring system by nonionic bonding
- 245.74 Boron, Germanium, phosphorous or
silicon containing
- 245.75 Having $-C(=X)-$, wherein X is
chalcogen, bonded directly to ring
carbon of the phthalocyanine ring
system (e.g., tetracarboxy copper
phthalocyanine, etc.)
- 245.76 Having $-C(=X)-$, wherein X is
chalcogen, attached indirectly to
ring carbon of the phthalocyanine
system by nonionic bonding (e.g.,
phthalocyanine acetic acids, etc.)
- 245.77 Sulfonyl bonded directly to ring
carbon of the phthalocyanine ring
system
- 245.78 Chalcogen bonded directly to the
sulfonyl group
- 245.79 Nitrogen bonded directly to the
sulfonyl group
- 245.8 Additional nitrogen in the
sulfonyl containing substituent
- 245.81 Nitrogen attached indirectly to ring
carbon of the phthalocyanine ring
system by acyclic nonionic bonding
- 245.82 Halogen bonded directly to ring
carbon of the phthalocyanine ring
system
- 245.83 At least eight halogens bonded
directly to ring carbons of the
phthalocyanine ring system
- 245.84 Processes of halogenating the
phthalocyanine ring system
- 245.85 Metal containing
- 245.86 Heavy metal or aluminum containing
- 245.87 Specified crystalline form or
processes of milling (e.g.,
alpha crystalline form, delta
crystalline form, ball milling,
acid milling, etc.)
- 245.88 Processes of forming the
phthalocyanine ring system
- 245.89 From reactant which contains
plural cyano groups (e.g.,
preparing from phthalonitrile,
etc.)
- 245.9 From reactant which contains
plural carbonyl groups (e.g.,
preparing from phthalic
anhydride, etc.)
- 245.91 ..Porphyrins (including hydrogenated;
e.g., chlorophyll, etc.)

CLASS 548 IS AN INTEGRAL PART OF CLASS
260 AS SHOWN BY THE POSITION OF THIS
BOX. THIS CLASS PROVIDES FOR FIVE-
MEMBERED HETERO RINGS HAVING AT LEAST
ONE NITROGEN ATOM.

- 330 .Compounds containing a hetero ring
which includes nitrogen and sulfur
ring hetero atoms wherein the hetero
ring has at least seven members or
fewer than five members
- 330.3 .Compounds having a sulfur containing
hetero ring and another hetero ring
which contains nitrogen
- 330.6 .Compounds containing a hetero ring
which includes nitrogen and oxygen
ring hetero atoms wherein the hetero
ring has at least seven members or
fewer than five members
- 330.7 ..Polycyclo ring system having the
hetero ring as one of the cyclos
- 330.8 ...Bicyclo ring system having the hetero
ring as one of the cyclos
- 330.9 .Compounds containing a hetero ring
having at least seven members or
fewer than five members consisting of
nitrogen and carbon, and an
oxygen-containing hetero ring

JUNE 1985

CLASS 549 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR HETERO RINGS HAVING SULFUR OR OXYGEN AS THEIR ONLY HETERO ATOMS.

- 349 NITROCYCLIC (E.G., AZIDES)
 350 R CARBOCYCLIC OR ACYCLIC
 350 L ..Leuco dyes
 351 ..Anthrones or anthranols
 351.1 ..Naphthacenes having oxygen bonded to the 11- or 12-position (e.g., tetracyclines, etc.)
 351.2 ...Adducts or complexes
 351.3 ...Tetracycline D-ring modified other than by halo in 7-position
 351.4 ...Tetracycline A-ring modified other than by removal of 4-dimethylamino
 351.5 ...Processes
 351.6 Purification or recovery
 352 ..Benzanthrones
 353 ...Dibenzanthrones or isodibenzanthrones
 354 Amino
 355 Oxy (non-leuco)
 356 Halogen
 357 Dibenzanthrone
 358 Isodibenzanthrone
 359 ...Anthanthrones
 360 ...Pyranthrones
 361 ...Benz-dianthrones
 362 ...Benzopyrequinones
 363 ...Polybenzanthronyl compounds
 364 ...Benzanthronyl compounds
 365 ..Diarylene ortho diketones (including leuco forms thereof)
 366 ..Heavy metal or aluminum containing
 367 ..Polyanthraquinonyl
 368 ..Extracyclic carbonyl
 369 ..Anthraquinonyl
 370 ...Sulfonyl
 371 Amino
 372 Extracyclic carbonyl
 373 Oxy
 374 N-aryl
 375 Oxy
 376 ...Extracyclic carbonyl
 377 Amino
 378 ...Amines
 379 N-oxyalkyl
 380 Oxy
 381 Halogen
 382 By ammonolysis
 383 Oxy
 384 Halogen
 385 ...By oxidation of anthracene
 386 ..Triarylmethanes
 387 ..Heavy metal or aluminum containing
 388 ..Diphenylanththylmethanes
 389 ..Triphenylmethanes
 390 ...Amino
 391 Triaminotriphenylmethanes (e.g., rosanilines)
 392 Sulfonyl
 393 Diaminotriphenylmethanes (e.g., malachite greens)
 394 Sulfonyl
 395 Oxy (e.g., aurines)
 396 R ..Quinones
 396 K ...Vitamin K compounds
 396 N ...At least one quionidal oxygen atom is replaced by a polyvalent element or radical
 397 ..Cyclopentanohydrophenanthrenes (1)
 397.1 ..Non-oxo-carbonylic (e.g., bile acids)
 397.2 ..Sterols (including vitamin D)
 397.25 ...Purification or recovery
 397.3 ..Oxo
 397.4 ...Oxy
 397.45 Modified C-ring
 397.47 C21 position substituent
 397.5 ...Oxy
 397.6 ..Para-N-benzene sulfoxy -X(X=C or N)
 397.7 R ..Sulfonamides (e.g., sulfanilamide)
 397.7 D Urea or thiourea containing
 397.7 DS....With additional sulfamyl group(s)
 398 ..Fats, fatty oils, ester-type waxes or higher fatty acids
 398.5 ..With preservative
 398.6 ..Preparing by oxidation of nonaromatic hydrocarbon mixtures
 399 ..Sulfur containing
 400 ...Sulfoxy containing
 401 Amino or amido containing
 402 Aryl nucleus containing
 402.5 ...Nitrogen containing
 403 ..Phosphorus containing (e.g., lecithin)
 404 ..Nitrogen containing
 404.5 ...Poly-nitrogen containing
 404.8 ...Reaction products with polycarboxylic compounds
 405 ..Acylated
 405.5 ..Unsaturation
 405.6 ..Isomerization
 406 ..Oxidized
 407 ..Polymerized
 408 ..Halogen containing
 409 ..Hydrogenated
 410 ..Synthetically produced higher fatty esters
 410.5 ...With phenols or aromatic alcohols
 410.6 ...With acyclic polyoxy alcohols
 410.7 Glycerides
 410.8 With non-higher fatty noncarboxylic acid
 410.9 R ...With acyclic monohydric alcohol
 410.9 N Unsaturated alcohols
 410.9 V Vitamin A acid esters
 412 ..Recovery or extraction from residues or organic material
 412.1 ...From fish livers
 412.2 ...From legumes, nuts or seeds
 412.3 ...With acidic or basic material
 412.4 ...Solvent extraction
 412.5 ...Foots, textile treating liquors, absorbents, sludges or industrial wastes
 412.6 ...Rendering
 412.7 ...With acidic or basic material
 412.8 ...Solvent extraction
 413 ..Higher fatty acids or their salts
 414 ...Heavy metal or aluminum containing
 415 ...By hydrolysis of fats, oils, waxes or esters
 416 With organic sulfonic acids
 417 With alkali-forming metal compound
 418 With subsequent treatment
 419 ...Purification
 420 ..Purification of fats, oils and waxes
 421 ...By esterification of free fatty acids
 423 ...By treatment with oxidizing agents
 424 ...By treatment with acid, acid anhydride or acid salt
 425 ...By treatment with basic substance
 426 With organic solvent
 427 With solid absorbent
 428 ...By physical treatment only
 428.5 With solvent
 429 R ..Heavy metal containing (2)
 429 AR ...Arenes
 429 C ...Azomethines
 429 CY ...Cyclomatic
 429 D ...Dithydroxy diaryl sulfides
 429 BQ ...Ion exchange
 429 J ...Chelates
 429 K ...Sulfur-containing acid

CARBOCYCLIC OR ACYCLIC

- 429 L .Heavy metal containing (2)
 429.1 ...Pl-allyl
 429.2 ..Actinide series metals
 429.3 ..Lanthanide series rare earth metals
 429.5 ..Zirconium and hafnium
 429.7 ..Titanium
 429.9 ..Tin
 430 ..Zinc
 431 ..Gold or silver
 432 ..Mercury
 432 ...With other heavy metal
 433 ...Aromatic
 434 ...Carbonylic
 435 R ..Lead
 435 A Nitro group containing
 436 ...Acetates
 437 R ...C-Pb (e.g., plumbanes)
 437 S Stabilization
 438.1 ..Copper
 438.5 R ..Chromium
 438.5 C Werner complexes
 439 R ..Iron, nickel or cobalt
 439 CY ...Cyclomatic
 440 ..Arsenic
 441 ...With other heavy metal
 442 ...Arsonic acids
 443 ...Carbonylic
 444 ...Arseno
 445 ...Carbonylic
 446 ..Antimony
 447 ..Bismuth
 448 R ..Aluminum containing
 448 A ...With Al-C bond
 448 AD ...Alkoxide or phenoxide
 448 B ...Salicylate or chelate
 448 C ...Clay or zeolite
- CLASS 556 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR HEAVY METAL, ALUMINUM, OR SILICON CONTAINING COMPOUNDS.
- 453 R .Esters and processes of making same
 453 A ...Cyanate or isocyanate
 453 P Methods of preparation
 453 PC Carbonylation of N- compound
 453 PH Phosgenation of amines
 453 SP Stabilization, purification or recovery
 453 AP Polycyclic
 453 AB Biuret polyisocyanates
 453 AR Aromatic
 453 AM Intercyclic methylene group
 453 AL Aliphatic (acyclic)
 453 RZ ...Per esters
 453 RY ...Thiosulfate or thiosulfonates
 453 RX ...Hypohalous acid esters
 453 RW ...Hydroxamic acid esters
 453.1 ..Thioimide acid esters (i.e.,
 H-N=CH-S-HCHH, wherein substitution
 may be made for hydrogen only)
 453.2 ...Imidothiocarbonates, or
 monoacidhalide, monoacid or
 monoanhydride derivatives (e.g.,
 monothiocarbonates, etc.)
 453.3 ...Thiohydroximidic acid esters (i.e.,
 HO-N=CH-S-HCHH, wherein
 substitution may be made for
 hydrogen only, including O-ester
 and O-ether derivatives)
 453.4 ...Pseudo thioureas (i.e.,
 HNH-C(=NH)-S-HCHH, wherein
 substitution may be made for
 hydrogen only)

- 453.5 Substituent, which contains benzene
 ring, bonded directly to pseudo
 thiourea nitrogen
 453.6 Substituent, which contains benzene
 ring, bonded directly to pseudo
 thiourea sulfur
 453.7 ...Imidic acid esters (i.e.,
 HN=CH-O-HCHH, wherein substitution
 may be made for hydrogen only)
 453.8 ...Hydroximidic acid esters (i.e.,
 HO-N=CH-O-HCHH, wherein
 substitution may be made for
 hydrogen only, including O-ester
 and O-ether derivatives)
 453.9 ...Pseudoureas (i.e., HNH-C(=NH)-O-HCHH,
 wherein substitution may be made
 for hydrogen only)
 453.99 ...Imido nitrogen is substituted
 454 ...Thiocyanic acid or isothiocyanic acid
 455 R ..Thiocarbonic acid or thiocarboxylic
 acid
 455 P Phosphorus containing
 455 A Carbamates
 455 B Carbonates
 456 R ..Sulfoxy acid
 456 F Perfluoro
 456 NS Non-sulfonic acid
 456 A Amine containing
 456 P Phenyl or aryl attached to ester
 function (not amine containing)
 457 ...Sulfuric acid
 458 R Acyclic
 458 F Perfluoro
 458 C Cyclic substituent containing
 459 R Unsubstituted alkyl
 459 A Amine quaternized with lower
 alkyl disulfate
 460 From olefines
 920 ..Phosphorus containing acid
 921 ...Phosphite reaction products of
 unknown chemical structure
 922 ...Boron containing
 923 ...Hydrazino group containing
 924 ...Amine salts of free phosphorus acid
 groups
 925 Of phosphate and thiophosphate
 diesters
 926 ...Polyphosphorus containing
 927 R Phosphorus in ring
 927 N Nitrogen cyclic
 928 Phosphorus acid ester of polyhydric
 alcohols
 929 Alcohol moiety contains an ether,
 thioether, sulfoxy or sulfone
 group
 930 Alcohol contains an aryl group
 931 Phosphorus-oxygen (or sulfur)
 carbon-phosphorus bond
 932 Phosphorus-carbon-phosphorus bond
 933 Pyrophosphorus (i.e., anhydrides)
 934 ...P-X-X or P-X(X) type (X is oxygen or
 sulfur)
 935 ...Anhydrides of phosphorus acid and
 non-phosphorus acid
 936 ...Phosphorus part of ring
 937 Dioxaphosphorinanes,
 dioxaphospholanes, and thio analogs
 938 ...Carbamate, urea, or thiourea group
 containing
 939 ...Cyanate or isocyanate group
 containing
 940 ...Nitrile or isonitrile group
 containing
 941 ...Non-oxo carbonylic group attached to
 phosphorus or to phosphorus linked
 carbon, e.g., P-O-C-C(=O)OR or
 P-N-C-C(=O)OR
 942 Poly non-oxo carbonyl

JUNE 1985

- CARBOCYCLIC OR ACYCLIC
 .Esters and processes of making same
 ..Phosphorus containing acid
 ...Non-oxo carbonylic group attached to phosphorus or to phosphorus linked carbon, e.g., P-O-C-C(=O)OR or P-N-C-C(=O)OR
 943 Amides of terminal carboxylic acid group
 944 ...Amine group in organic substituent and derivatives thereof
 945 Tertiary or quaternary amine
 946 ...Oxo group containing (i.e., aldehyde, ketone)
 947 ...Sulfur containing (sulfur is not bonded to phosphorus)
 948 Thioether, sulfoxide, or sulfone
 949 Sulfur attached to nuclear carbon of aromatic ring
 950 ...Oxy group containing and derivatives
 951 Ether oxygen attached to nuclear carbon of aromatic ring
 952 Acyloxy
 953 Hydroxy group and alcoholates thereof
 954 ...Nitro group containing
 955 ...Polyfluorinated in organic substituent
 956 ...Unsaturated organic substituent
 957 P-X-C=C type (X is O or S)
 958 ...Cycloalkyl group containing
 959 ...P-N containing
 960 ...P-Halogen containing
 961 ...Phosphinates with 2 P-C linkages and phosphonates with 1 P-C linkages
 962 ...Phosphinites having 2 P-C linkage
 963 ...Phosphates
 964 Having one P-X-aromatic ring, linkage (X = O, S, Se, Te)
 965 Having two P-X-aromatic, ring linkages (X = O, S, Se, Te)
 966 Having three P-X-aromatic ring linkages (X = O, S, Se, Te)
 967 ...Phosphites
 968 ...Processes
 969 Arbuzov rearrangement and Perkow reaction type
 970 Reaction with $P(=X)H$ or $P(=X)Na$ (X is O or S)
 971 Ester formation
 972 Using phosphorus halide reactant
 973 With hydroxy reactant
 974 Halide is phosphorus oxychloride or phosphorus thiocloride
 975 Including catalyst
 976 Halide is phosphorus pentachloride or phosphorus trichloride
 977 With olefin oxide or olefin sulfide
 978 Using phosphorus acid or salt reactant
 979 With organic halide
 980 Using phosphorus oxide reactant
 981 Using phosphorus sulfide reactant
 982 Ester interchange, i.e., interesterification or transesterification
 983 Free acid group formation
 984 Amidation
 985 Oxidation of sulfurization
 986 Halogenation or dehalogenation
 987 Salt formation or neutralization
 988 Pyrophosphorus or anhydride formation
 989 Stabilization, decolorizing, deodorizing, or isomerization
 990 Purification or separation of reaction mixture components
 462 R ..Boron-containing acid
 462 A Hydrocarbon oxidation with boron additive
 462 C Carbon to boron bonds
 463 ..Carbonic or chlorocarbonic acid
 464 ..Nitrile or isonitrile
 465 R ...Aromatic
 465 B From non-oxo-carbonylic through amide
 465 C From hydrocarbon
 465 D Non-oxo-carbonylic
 465 E Amino
 465 F Oxy
 465 G Halogen
 465 H Polynitrile or polyisonitrile
 465 K Unsaturated
 465.1 ...Acyclic
 465.2 From non-oxo-carbonylic compounds (through the amide)
 465.3 From hydrocarbons
 465.4 Non-oxo-carbonylic
 465.5 R Amino
 465.5 A From hydrogen cyanide, amine, or ammonia and aldehyde
 465.6 Oxy
 465.7 Halogen
 465.8 R Polynitrile
 465.8 D Dimerization non-amalgam
 465.8 A Dimerization using amalgam
 465.9 Unsaturated
 466 ..Nitric or nitrous acid
 467 ...Acyclic nitrates
 500.5 R ..Radical-X-H acids (X = chalcogen)
 500.5 H ...Hydroxamic acids
 501.1 ..Amine addition salts
 501.11 ...Amion acid (including betaines)
 501.12 ...Compound contains sulfur or phosphorus
 501.13 Quaternary ammonium carboxylic acids (e.g., betaines)
 501.14 ...Amidines (including guanidines)
 501.15 ...Quaternary ammonium
 501.16 ...Halocarboxylic acid
 501.17 ...Carbonylic or oxy-amine (including organic hydroxyl amine)
 501.18 Polycarbocyclic or fused carbocyclic amine
 501.19 Compound contains sulfur or phosphorus
 501.2 ...Polyamine or organic hydrazine
 501.21 ...Compound contains sulfur or phosphorus
 502 R ..Peroxide
 502 A Oxidation of aldehydes
 502.3 ..Acids of boron
 502.4 R ..Acids of phosphorus
 502.4 A Acylation
 502.4 P Plural phosphorus
 502.5 R ..Containing nitrogen (except ammonium salts)
 502.5 B ...Phosphamic, thiophosphonic or thiophosphinic
 502.5 C ...Gem-phosphonic or gen-phosphinic
 502.5 D ...Benzene ring containing
 502.5 E ...Phosphonomethyl- or phosphinomethylamino
 502.5 F Phosphonomethyl- or phosphinomethylglycyl
 502.5 G ...Non-oxo-carbonylic
 502.6 ..Acid function containing sulfur

CLASS 560 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR CARBOXYLIC ACID ESTERS.

JUNE 1985

CARBOCYCLIC OR ACYCLIC

- 503 ..Radical-X-H acids (X = chalcogen)
- 503.5 ..Acid function containing sulfur
- 504 R ...Sulfonic acids
- 504 R Hydrophenanthrene nucleus containing
- 504 R Sulfonation products of non-aromatic hydrocarbon mixtures
- 504 S After treatment of sludge
- 504 A Polyvalent metal salts
- 505 R Aromatic
- 505 A Alkylation and sulfonation
- 505 C Polynuclear compounds
- 505 P Purification and preservation
- 505 E Benzene, toluene, xylene, sulfonation
- 505 S Alkylate sulfonation
- 505 N Neutralization and salt formation
- 506 Diaminomethylene
- 507 R Non-oxo-carbonylic
- 507 A Stilbene sulfonic acid
- 508 Amino
- 509 Oxy
- 510 Polyamino
- 511 Oxo
- 512 R Oxy
- 512 C Polynuclear
- 513 R Acyclic
- 513 F Perfluoro
- 513 B Produced by sulfurous acid salts
- 513 H Produced by sulfonyl halides
- 513 N Nitrogen containing
- 513 T Processes using sulfur trioxide
- 513.5 ...Thiocarbamic
- 513.6 ...Sulfamic
- 513.7 ...Sulfinic (e.g., formaldehyde sulfoxylates)

CLASS 562 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR CARBOXYLIC ACIDS.

- 543 R ..Acid halides
- 543 A ...Hydroxamic acid halides
- 543 F ...Acid fluorides
- 543 PN ...Cyclic compounds containing both P and N as ring members
- 543 P ...Phosphorus halides
- 543 B ...Boron halides
- 543 H ...Sulfonyl halides
- 543.1 ...Imidic acid halides
- 543.2 ...Isocyanide dihalides (i.e., imido carbonic acid halides)
- 544 R ..Carboxylic
- 544 A Carboxylation processes
- 544 C Carbamyl halides
- 544 F Acyl fluorides (except carbamyl)
- 544 K Phosgene as reactant or product
- 544 L Alcyclic acyl halides
- 544 D Aromatic acyl halides
- 544 B Fused and bicyclic ring containing
- 544 P Polycyclic
- 544 S Sulfur containing
- 544 N Nitrogen containing
- 544 Y Acyclic acyl halides
- 545 R ..Acid anhydrides
- 545 P ...Phosphorus-containing
- 546 ..Carboxylic only
- 547 ...Vapor phase pyrolysis of corresponding acids
- 548 ...From salts of corresponding acids
- 549 ...From carboxylic acid esters
- 550 ..Selenium or tellurium containing

CLASS 564 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR AMINO NITROGEN CONTAINING COMPOUNDS.

CLASS 568 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR BORON, PHOSPHORUS, SULFUR OR OXYGEN CONTAINING-COMPOUNDS.

- 665 R ..C-metal
- 665 G ...Grignard type
- 665 B ...Beryllium containing

CLASS 570 IS AN INTEGRAL PART OF CLASS 260 AS SHOWN BY THE POSITION OF THIS BOX. CLASS 570 RETAINS ALL THE PERTINENT DEFINITIONS AND CLASS LINES OF CLASS 260.

CLASS 585 FOLLOWS THE SCHEDULE HIERARCHY AS DETERMINED BY THE POSITION OF THIS BOX. THIS CLASS PROVIDES FOR HYDROCARBONS

- 684 PROCESSES
- 685 ..Sulfurization
- 686 ..Sulfonation or sulfation
- 687 R ..Oxidation
- 687 H ...Hydroxylation
- 688 ..Nitration
- 689 ..Reduction of nitro, nitroso or azomethine groups
- 690 ..Hydrogenation
- 691 ..Acylation
- 692 ..Etherification
- 693 ..Fusion with alkalis
- 694 ..Halogenation
- 695 ..Polymerization
- 696 ..Unsaturation (e.g., by dehydrogenation)
- 698 ..Regulatory
- 699 ..Repression of by-products
- 700 ..Temperature control
- 701 ..Chemical purification
- 702 ..Oxidation of impurities
- 703 ..Separation from sulfuric acid solution
- 704 ..Physical treatments only
- 705 ..With extraction
- 706 ..With sublimation
- 707 ..With crystallization
- 708 ..With adsorption (e.g., decolorizing or decolorizing)

CROSS-REFERENCE ART COLLECTIONS BASED ON INDUSTRY OR ART USE

- 998.11 DENTAL
- 998.12 ABLATIVE
- 998.13 BRAKE, FRICTION OR ANTI-SKID
- 998.14 BALL, BAT, PIN OR BILLY
- 998.15 FLOOR COVERING
- 998.16 SOUND RECORD
- 998.17 PEARLESCENT
- 998.18 MOLD OR MOLD COATING
- 998.19 ROAD MARKING OR PAVEMENT COMPOSITIONS (NON-CEMENTITIOUS, NON-BITUMINOUS)

DIGESTS

- DIG 14 Soil treatment digest (polyelectrolytes)
- DIG 15 Antistatic agents not otherwise provided for
- DIG 16 ..Antistatic agents containing a metal, silicon, boron or phosphorus
- DIG 17 ..High polymeric (resinous) antistatic agents

BEST COPY AVAILABLE

JUNE 1985

- Antistatic agents not otherwise provided
for
.High polymeric (resinous) antistatic
agents
- DIG 18 ..High polymeric (resinous) antistatic
agents containing pentavalent
nitrogen
- DIG 19 .Non-high polymeric antistatic agents/N
- DIG 20 ..Antistatic agent contains pentavalent
nitrogen
- DIG 21 Polymer chemically or physically
modified to impart antistatic
properties and methods of antistatic
agent addition
- DIG 22 Concentration
- DIG 23 Fiber
- DIG 24 Flameproof
- DIG 25 Metal catalyst
- DIG 26 Multicolor
- DIG 27 Nomenclature
- DIG 28 Peroxide
- DIG 30 Properties
- DIG 31 Ionic cross-link
- DIG 32 Incompatible blend
- DIG 33 Molecular sieve
- DIG 34 Hydantoin
- DIG 35 Crystallization
- DIG 37 Closure
- DIG 38 Ink
- DIG 41 Glass flake
- DIG 42 Melts used in preparation of non-cyclic
aliphatic chloro-, bromo- and
iodo-hydrocarbons
- DIG 43 Promoting degradability of polymers
- DIG 44 Beta branched fatty acid
- DIG 45 Polymer dispersions
- DIG 46 Vibration dampening composition
- DIG 47 Poisons, foods or pharmaceuticals

JUNE 1985

1	SPECIAL ARTICLES	114	...Variably or intermittently driven
2	.Envelope	115	In oscillatory movement
3	FEEDING AND DELIVERING	116	By over-running one-way drive
3.1	.Delivering to stack and feeding therefrom	117	...Separator adjustable or retractable relative to pack
4	.Separators and conveyors	118	Feed by successive approach and retraction
5	..Pneumatic separator	119	...Separator having non-uniform periphery
6	..Continuous endless conveyor	120	Including relatively movable elements
7	..Continuous endless conveyors	121	...With means to restrain feed of next sheet
8.1	FEEDING	122	By restrainer having rearwardly moving surface
9	.Multiple supply	123	By restrainer acting on rear end of sheet
10	.Separators and conveyors	124	By adjustable restrainer
11	..Pneumatic separator	125	Including restraining roller
12	...Endless conveyor	126	With means to urge pack toward separator
13	Side aligner	127	Including pivoted pack holder
14	...Reciprocating conveyor	42	..Reciprocating
15	...Side aligner	128	...With pack advancer
16	..Buckling separator and endless conveyor	129	...With sheet on edge
17	...Side aligner	130	And feeler control for advancer
18	.Separators	131	...Bottom feed
18.1	..Magnetic or electrostatic	132	Suction assisted
18.2	...Cyclicly moving	133	With means to prepare pack or bottom sheet for feeding
18.3	..Surface-piercing element(s)	134	By relief of pack weight
19	..Buckling	135	By partial planar movement of bottom sheet
20	...Pneumatic	136	With means to skip or stop feed
21	...Rotary	137	With means to restrain feed of next sheet
22	Pack advancer	138	By adjustable exit or throat
23	Bottom feed	139	By pusher reciprocating variably or non-rectilinearly
24	Pack advancer	140	Orbital (e.g., four-way) motion of pusher
25	Feeler control	141	By pin (e.g., pointed) pusher
90	..Pneumatic	142	By adjustable (e.g., for sheet thickness) pusher
91	...Plural, relatively-moving suction members	143	By self-aligning (e.g., yieldable) pushers
92	Laterally receding members (e.g., for tautening sheet laterally)	144	Holder adjustable to size of sheet
93	Including members for separating and members for forwarding sheet	225	..By means to change direction of sheet travel
94	...Unidirectionally-moving suction member or surface	226	..With means to align sheet
95	Having additional movement	227	..Responsive to sheet-sensor
96	With means to adjust suction	228	...To control gripper-couple moving sheet to alignment
97	...Sheet removal by pressurized gas	229	..With means to retard sheet before alignment
98	And suction means	230	...By member moved with sheet
99	...Suction member acting on bottom of pack	231	Including suction retarder
100	Oscillating member bending margin of bottom sheet	232	..Against aligner entering hole in sheet
101	With moving segments supporting remainder of pack	233	..Against rear-edge aligner
102	Suction member reciprocating perpendicularly to sheet	234	..Against plural aligning assemblages
103	...Sheet-moving action of suction member results from engagement with sheet	235	...For incremental travel against successive front-edge aligners
104	...With means to restrain feed of next sheet	236	...For front and side alignment of sheet
105	...Means effecting preliminary operation on sheets in pack	237	Alignment of imbricated sheets
106	Suction member flexing sheet or portion	238	Including oppositely-disposed side-edge aligners
107	...Oscillating suction member	239	...Plural aligners selectively used
108	...Controlled by valve means	240	...Oppositely-disposed side-edge aligners
30.1	...Pack advancer	241	..By aligning a sheet-holder and its sheets
31	Feeler control	242	..Against temporarily-stopped conveyer
31.1	Stack on edge	243	..Against front-edge aligner moved in direction of sheet travel
33	..Adhesive	244	...By retro-moving front-edge aligner
34	..Endless belt	245	..Against front-edge aligner interposed into sheet path
35	...Bottom feed		
109	..Rotary		
37	...Preliminary protrusion		
38	Feeler control		
110	...Control of separator responsive to sensing of sheet		
111	Including plural separators or plural sensors		
112	...Suction assisted		
113	...Separator rotating in plane of foremost sheet		

FEEDING	161	..With means to bow sheets
..With means to align sheet	162	..Holder movable relative to feed position
..Against front-edge aligner interposed into sheet path	163	...Holder convertible from feed to delivery
246 ...Synchronized with intermittently-active conveyor-couple	164	...Holder moved parallel to plane of sheets
247 Including sheet-margin gripper	165	..For feed from bottom of pack
248 ..Against aligner adjacent side edge of sheet	166	...With means to relieve weight of pack
249 ...By shifting aligner and gripper-couple laterally of sheet travel	167	...With means to restrain feed of next sheet
250 ...By means to shift sheet laterally against aligner	168	...By sheet-impaling restrainer
251 By oblique conveyor	169	...By lateral margin or side-edge restrainer
252 By gripper-couple pulling sheet laterally	170	Corner snubber
253 ..With means to adjust position of aligner	171	...Holder adjustable to size of sheet
254 ...During operation of feeder	278	DELIVERING
255 ...With indicator of aligner position	279	..Multiple discharge
256 ..With means to interrupt feeding	280	..For separating sheet from moving assemblage of sheets
257 ..Manually controlled (e.g., for alternate-cycle feed)	281	...By separating member moving in direction opposite of assemblage
258 ..Responsive to sheet-sensor	282	...By sheet attracting means
259 ...Plural sensors	283	Pneumatic attracting means
260 Pneumatic sensors (e.g., to sense superposed sheets)	284	Opposed pneumatic attracting means
261 Laterally spaced sensors (e.g., to sense misalignment)	285	...With leading edges of sheets offset
262 ...Excess-thickness sensor	286	...With means to cause offset
263 ...To activate an electric circuit	287	..Of successive sheets to plural receivers in succession
264 ..By means to convey sheet (e.g., from pack to operation)	288	...With control means to vary mode of operation
265 ..Responsive to sheet-sensor	289	To bypass array of receivers
266 ..With intermittent movement of the sheet	290	To route sheets to subsequent array of receivers
267 ..On oscillating or reciprocating conveyor	291	...With selective actuation of means for inverting duplex sheets
268 ...Including gripper-couple	292	...With movable receivers or receiver portions
269 ...Including rear-edge pusher	293	...With means to increase spacing between receiver defining portions
270 ..With means to vary speed of conveyor sheet	294	Receivers moving into registry with delivery zone
271 ..By rear-edge pusher	295	Receivers arranged in rotary array
272 ..Between superposed conveyor couple	296	...By diverter or conveyor moving past receivers
273 ...Having means to permit separation of couple	297	...By individual diverter for each receiver
274 Including couple-elements resiliently urged together	298	..With means to program discharge destination
275 ..On peripheral face of drum or belt	299	..To laterally spaced receivers
276 ...Including pneumatic means	300	..By release from conveyor at plural locations
277 ...Including gripper-couple	301	..Selectively to recirculating path or exit
145 ..Pack holders	302	..By conveyor section movable to direct sheets along alternate paths
146 ..With means to vibrate pack	303	..With movable diverter
147 ...Advancer	304	...Bidirectionally rotating diverter roller
148 ...With means to move portions of advancer unequally (e.g., for unequal-thickness sheets)	305	...Individual diverter for each receiver
149 ...For on-edge or imbricated sheets	65	..Optional face or back
150 Supported by moving conveyor belt	66	..Endless conveyors to flies
151 For imbricated sheets	67	..Endless conveyors to curtains
152 ...Control of advancer responsive to sensing of foremost sheet	69	..Endless conveyors to other conveyors
153 Sensor included in feed mechanism	70	..To flies
154 Sensor activates electric or fluidic circuit	72	..Rotary conveyors to flies
155 Controlled electric or fluidic motor actuates advancer	73	..Curtains
156 Controlled pawl and ratchet actuates advancer	306	..With transfer means between conveyor and receiver
157 ...With means to replenish pack or retract advancer platform	307	..Means to strip sheets from engagement with moving conveyor
158 Using plural platforms during continuous operation of feeder	308	...Stripper cyclically movable between stripping and nonstripping position
159 And plural drives for plural platforms	309	...By air blast
160 ...Urged by spring or weight	310	...By means to attract sheet from conveyor
	311	...Stripper normally in contact with conveyor surface

JUNE 1985

DELIVERING	217	Lowering as pack-height increases
..With transfer means between conveyor and receiver	218	With auxiliary support for part of pile
..Means to strip sheets from engagement with moving conveyor	219	Spring-loaded support
312 ...Stripper normally in spaced relation to conveyor surface	220	..With movable pack-limiting member(s) (e.g., hold-down)
313 With means to maintain constant spacing of movable stripper	221	...And means to move members cyclicly against sheet edges (e.g., jogger)
175 ..Means to drape sheets over horizontal bar	222	And yieldable connection in moving means
176 ..Responsive to delivered sheet	223	...Members adjustable to sheet size
177 ..Means to push sheets out of edgewise into broadside movement (e.g., packer)	224	Sheet-impact bumper member
178 ...Rotating packer	900	CROSS-REFERENCE ART COLLECTIONS
179 Screw or helix	901	STRIPPER
180 ...By reciprocating or oscillating packer	902	MAGNETIC OPERATION
181 Packing sheets on-edge into receiver	903	REVERSE DIRECTION OF SHEET MOVEMENT
182 ..Means to retard sheets		TRAVELING WICKET (FOR SHEETS ON EDGE)
183 ...By suction retarder		
184 ..Means to change orientation or direction of sheets during delivery		
185 ...Orientation-changing means		
186 Sheet inverting means		
187 By rotating circumferential-pocket members		
188 ..Means to bow sheets during delivery		
189 ..Means temporarily interposed between conveyor and receiver		
190 ...Transversely-disposed, gapped sheet-supports on endless carrier		
191 ...Endless belt on reciprocating carrier		
192 ...Counter-rotating supports for lateral margins		
193 .By electrostatic or magnetic conveyor		
194 .By pneumatic conveyor		
195 ..Using pressurized gas		
196 ..Unidirectionally-moving suction member or surface		
197 ...Including endless-belt conveyor and suction chamber		
198 .By endless conveyor		
199 ..Operation controlled by delivered sheet		
200 ..With delivery end movably relative to pack receiver		
201 ...Moving away from increasing delivered pack		
202 ..With means to vary speed of sheets on conveyor(s)		
203 ...By cyclicly varying conveyor speed		
204 ..Suspension gripper		
205 ...For lateral margins of conveyed sheet		
206 ...With means to adjust gripper		
314 .Rotary conveyor		
315 ..With circumferential pocket members		
81 ..Traveling		
82 ..Suspension gripper		
83 ..Flies		
84 .Reciprocating conveyors		
85 ..Suspension gripper		
207 .To receiver for pack of sheets		
208 ..With means to discharge static electricity		
209 ..With means to bow sheets		
210 ..With means to vibrate receiver		
211 ..With air cushion between sheet and pack		
212 ..For receiving sheets from below the pack		
213 ..With movable sheet-surface support		
214 ...Receding from delivery zone (e.g., retractor)		
215 Responsive to increase		
216 Conveyor-receiver for imbricated sheets		

JUNE 1985

1 R	MISCELLANEOUS		
1 A	..Adapters	47	..Moving-cam actuator
1 B	..Quick	48	...Threaded sleeve and wedge
1 C	..Centrifugal type	49	...Threaded cam sleeve
1 D	..Diaphragm type	50	Loose jaws
1 DC	..Dual chucks	51	...Reciprocating cam sleeve
1 E	..Ejectors	52	..Fixed cam and moving jaws
1 F	..Sliding cam type	53	...Threaded-sleeve actuator
1 G	..Gear holding	54	...Axial screw actuator
1 H	..Independent motor type	55	..Loose jaws
1 J	..Compensating for eccentricity		..Loose jaws
1 K	..Chuck key cooperating structure	56	..Moving-cam actuator
1 L	..Centering	57	...Threaded cam sleeve
1 M	..Magnetic type	58	...Reciprocating cam sleeve
1 ME	..Mechanical expedients	59	..Fixed cam and moving jaws
1 N	..Non-split collet	60	...Threaded sleeve and body
1 P	..Overhang	61	..Obliquely guided reciprocating jaws
1 Q	..Rubber	62	..Threaded sleeve and jaw
1 DA	..Double acting	63	...Conical sleeve
1 S	..Stops	64	..Threaded central cone and jaw
1 SG	..Self-grasping	65	..Threaded sleeve and body
1 SJ	..Soft jaws	66	..Reciprocating jaw advancing sleeve
1 T	..Twist	67	..Radially reciprocating jaws
1 TE	..Transverse eccentric actuating means	68	..Transverse-screw actuated
1 TS	..Tool select		...Interlaced jaws
1 W	..Washer type jaw or actuator	69	..Moving-cam actuator
2 R	EXPANDING	70	...Threaded cam sleeve
2 A	..Fluid actuated	71	...Threaded sleeve and wedge
3	VACUUM	72	...Rotary eccentric-cam sleeve
4	WITH FLUID-PRESSURE ACTUATOR	73	Roller and rocking jaw
5	ANGULARLY ADJUSTABLE OR INDEXING	74	...Worm actuated
6	ECCENTRIC	75	...Reciprocating cam sleeve
7	THREADED GRIP	76	...Ball or roller jaws
8	LONGITUDINAL SCREW CLAMP	77	..Side detent
9 R	SOCKET TYPE	78	..Pivoted or rotary
9 A	..Adjustable spindle	79	...Sleeved
14	..Multiple alternative	80	..Spring
16	..Self-centering of floating	81	...Sleeved
17	..Radially reciprocating jaws	82	..Rotary cam sleeve
18	..Transverse holder and setscrew	83	..Reciprocating sleeve
19	..Lost motion	84	..Set screw
19.1	..Swinging external yoke or detent	85	..U-clamp
19.2	...Rotary socket	86	..Plural bolt
19.3	..Rotary socket	87	..Single transverse bolt
19.4	..Spreading elements	88	..Longitudinal clamping wedge
19.5	..Key retainer	89	..Shouldered-tang holding
19.6	..Sleeve type retainer	90	..Cap
19.7	...Sleeve in socket	91	...Screw
20	..Fluid-conduit drill holding	93	..Tang offset within socket
	..Self-grasping	94	..Tang offset without socket
	..Yielding grasping jaws	95	..Bottomless
22	...Ball or roller	96	..Friction grip
23 R	...Spring jaws	97	..Transverse pin
23 A	Feed type	99	..Screw threaded
24	..Yielding detent	100	..Nut lock
	..One-way-clutch type	101	...Threaded sleeve
28	...Wedge	102	..Friction grip
29	...Side detent	103	..Drill type
30	Ball or roller	104	..Barbed or pronged tang
32	..Conical clamp threaded in socket	105	..Molded or cast-in tang
33	..Transversely oscillating jaws	106	PIVOTED JAW
34	..Screw actuated	107	..Cam-sleeve actuated
35	..Pivoted jaws	108	..Internal-cone actuated
	..Moving-cam actuator	109	..Toggle actuated
36	...Threaded cam sleeve	110	RADIALLY RECIPROCATING JAWS
37	...Reciprocating cam sleeve	111	..With indicator
38	..Fixed cam and moving jaws	112	..Transverse-screw actuated
39	...Axial screw actuator	113	..Annular rack
40	...Threaded-sleeve actuator	114	..Spiral cam or scroll actuated
	..Split socket	115	..Worm
41 R	..Resilient	116	..Bevel pinion
41 A	Feed type	117	..Rack-and-pinion actuated
42	...Threaded cam sleeve	118	..Toggle actuated
43	...Reciprocating cam sleeve	119	..Lever actuated
44	..One movable side	120	..Internal cone
45	...Sleeved	121	..Wedge actuated
46 R	..Spring jaws	122	..External-cone actuated
46 A	...Feed type	123	..Jaws

JUNE 1985

1 R	MISCELLANEOUS	43	.Fluid-current motors
1 A	..Unitary plant	44	..Wind
1 B	..Air-cooled generator	45	TRACTION
1 C	..Drive gearing	46	STARTING AND GENERATING DYNAMO
1 D	..Chain drive	47	ELECTRIC-STARTING MOTOR WITH GENERATOR
1 E	..Spring motor	48	ELECTRIC-STARTING MOTOR
2	HEATING PLANTS	49	ROTARY FIELD AND ARMATURE
3	TRAIN	50	BATTERY
4 R	PLURAL PRIME MOVER	51	ENGINE CONTROL
4 A	..Tie with another generator	52	TURBOGENERATORS
4 B	..Induction generator	53	TIDE AND WAVE MOTORS
4 C	..Plural with combined drive	54	FLUID-CURRENT MOTORS
4 D	..Plural prime movers with fluid interconnection	55	.Wind
5	ALTERNATING CURRENT, ROTARY FIELD AND ARMATURE		
6	MULTIPLE-ARMATURE DYNAMO		
7	ELECTRIC CONTROL		
8	.Excitation dynamo		
	.Traction		
9	..Electric traction motor		
10	...With starting and generating dynamo		
11	With generator		
12	Rotary field and armature		
13	Ignition		
14	...With generator		
15	Rotary field and armature		
16	Battery		
17	Engine control		
18	As starter		
19	As generator		
20	Rotary field and armature		
21	Engine control		
22	..Starting and generating dynamo		
23	...Rotary field and armature		
24	...Engine control		
25	...Engine control		
26	Ignition		
27	..Electric-starting motor with generator		
28	..Electric-starting motor		
29	..Rotary field and armature		
30 R	.Demand starters		
30 A	..Standby source		
30 B	..Standby service		
31	.Starting and generating dynamo		
32	..With generator		
33	...Ignition		
34	..Engine control		
35	...Ignition		
36 R	.Electric-starting motor with generator		
36 A	...Automatic starters including centrifugally operated contactors		
37 R	..Ignition		
37 A	Stop cranking responsive to generator output		
38 R	.Electric-starting motor		
38 A	...Axially movable armatures		
38 B	...Inertia starters		
38 C	...Miscellaneous collection of automatic engine starters		
38 D	...Stop cranking responsive to manifold conditions		
38 E	...Automatic starter including pedal control		
39	.Rotary field and armature		
40 R	.Engine control		
40 A	...Control in response to engine speed		
40 B	...Control in response to generator line conditions		
40 C	...Control in response to generator and prime mover conditions		
40 D	...Control in response to a time standard		
40 E	...Circuit resonant at given frequency		
40 F	...Control in response to D. C. generator output		
41	..Ignition		
42	.Tide and wave motors		

JUNE 1985

1.1	MISCELLANEOUS	62	BRICK CARRIERS
1.2	CONTACT LENS APPLICATOR	63.1	.Hoist-line frame
1.3	SANITARY HANDLER FOR PET DROPPINGS	63.2	..Expanding grapple, fluid pressure
1.4	.Pole mounted		inflatable
1.5	..Catcher	64.1	VACUUM
2	MISCELLANEOUS COMPOUND IMPLEMENT	64.2	.Venturi effect
3	.Plier or tong type	64.3	.By positive fluid stream directed
3.5	MORTAR HAWK		against article
3.6	ZIPPER PULLING TOOL	65	.Frames
4	BARREL-ROLLER TYPE	65.5	MAGNET
5	EAR-CORN HOLDERS	66.1	UNDERWATER IMPLEMENT
5.5	ROD-TYPE SUPPORTS AND HANGERS	66.2	.With locating means
6	PLATE TURNERS	81.1	SPACING HOIST BAR OR FRAME
7	PANCAKE TURNER TYPE	81.2	.Adjustable to accommodate different
8	.Special turning element		size loads
8.5	CLOTHES TONGS	81.21	..Telescopic
8.6	CARPET STRETCHER	81.3	.With center of gravity adjustment
132	WIRE ENGAGING AND CLAMPING MEANS FOR USE	81.4	.With orienting means
	WITH CABLE TYPE WIRE TENSIONING	81.41	..Load engaging guide
	APPARATUS	81.5	.Load supporting units
133	.Wire engaging portion of means includes	81.51	..Pivotal about horizontal axis
	rotatable, generally circular disk or	81.52	..Rotatable about vertical axis
	cylinder	81.53	...Twist lock
134	.Including threaded tightener	81.54	..Horizontally slideable
135	.Including pivotally attached and hand	81.55	..Underlying load spanning support and
	engaged lever		sling
136	..Having curved, camming protrusion	81.56	..Hook
	formed on lever	81.6	.Load gripping units
9	STOVE IMPLEMENTS	81.61	..Pivoted gripping element
10	.Combined	81.62	..Slideable gripping element
11	.Fire tong	68.1	HOISTABLE RECEPTACLE
12	.Lid lifter	68.2	.With discharge or loading means
13	..Pivoted jaw	68.21	..Bottom or side discharge or loading
14	.Poker	68.22	...Bucket or bailer type
15	HAND BARS AND HAND BARROWS	68.23	Twin bucket sectors (e.g., clamshell
16	.Opposing jaws		bucket)
17	.Cant hook type	68.24	Twin doors
18	.Railway coupling tools	68.25	Vertically sliding closure
19.1	POLE MOUNTED IMPLEMENT	68.26	..Tilting discharge or loading
19.2	.Ball Retriever	68.27	...With trunnions
19.3	.Grappling Gaff	68.3	.Separable auxiliary hoisting means
22	.Store goods		(e.g., sling, spreader frame)
23	..Compound tool	67.1	HOISTLINE ATTACHED LOAD SUPPORTING FRAME
23.5	.Laundry sticks	67.2	.L-frame
24	.Compound tool	67.21	..With center of gravity adjustment
25	HAND AND FINGER ATTACHMENTS	67.22	..With load retainer
26	HAND-HOOK TYPE	67.3	.Load capturing supports
26.5	DISCHARGING HAND RECEPTACLES, TRAYS OR	67.31	..Pivotable about horizontal axis
	CAGES	67.32	..Rotatable about vertical axis
27.1	DETACHABLE PLATE AND RECEPTACLE LIFTER	67.33	..Horizontally slideable
28	.Pivoted graspers	67.4	.Underlying load spanning support and
29	..Rim- and bottom-engaging		sling
30	..Axially extending handle	67.41	..With load retainer
31.1	..Rim gripping jaws	67.5	.Load leveling or shifting
31.2	.Band type	74	HOIST-LINE SLINGS
32	.Bottom-engaging	75	.Latch release
33	.Resilient	76	..Bottom
34	.Sliding graspers	77	.Net
49	HAND FORKS AND SHOVELS	82.1	HOISTLINE OR GRAB HOOK
50	.Fork-tine shovel clearers	82.11	.Cable and hook tackle
50.5	..With grappling-type forks or shovels	82.12	..With center of gravity adjustment
50.6	.Grappling type	82.13	..Opposed load grasping hooks
50.7	..Annularly arranged	82.14	..Choker type
50.8	..With movable cooperating load-engaging	82.15	.Driven positioning mean
	member	82.16	.Resilient suspension means (e.g.,
50.9	...Fixed and movable members		spring or fluid)
51	.Convertible and combined	82.17	.Locking device (i.e., hook throat
52	..Fork and rake		closure)
53.5	.Pivoted and adjustable head	82.18	..Overlapping loop forming hooks
54.5	.Snow shovel	82.19	..Locking arm swings in plane of hook
55	.Scoop	82.2	...With pivoted latch
55.5	.Fork	82.21	...With sliding latch
56	.Edge guards	82.22	..Swivel locking arm
57	.Handles	82.23	..Slidable locking arm
58	..Auxiliary	82.24	.Load releasing means
59	.Attachments	82.25	..Parachute release means
60	..Foot pieces	82.26	..Store ejector (e.g., aircraft carried)
61	SPEARS	82.27	..Boat detaching

	HOISTLINE OR GRAB HOOK	104	..Pivoted jaw
	..Load releasing means	105	...Hayfork type
82.28	..Plurality of balls	106	.Pivoted jaws
82.29	..Explosive release	107	..Hayfork type
82.3	..Motor operated	108	...With auxiliary retainer
82.31	..Pivoted load support	109	...Latched
82.32	...Plurality of similar coacting supports	110.1	..Automatic
82.33	...With pivoted latch	110.2	...Cam and follower
82.34	...With sliding latch	111	..Separate cable operator
82.35	..Sliding load support	112	...Suspension
82.36	..Load ejecting	113	..Surrounding frame
79	GAMBRELS	114	...Opposing load-engaging cams
80	..Grappling	115	..Separate sliding operator
85	OVERHEAD BEAM HOOKS AND GRAPPLES	116	..Cam-operated
86.4	GRAPPLE	117	..Auxiliary operating handle
86.41	..Load shifting	118	..Crossed levers
86.42	..Interwoven contractable gripper (e.g., chinese fingers)	119	...Tandem tongs
		119.1	..Slideable jaws
		119.2	.Band type
86.1	..Well type	119.3	..Inflatable
86.11	..Basket-forming	119.4	..Swing dampener
86.12	..Combined insertable and surrounding grappling means	120	HAYFORK TYPE
86.13	..With separate lateral positioning means	121	..Corkscrew
86.14	..With separate grapple-setting operator	122	..Single tilting fork
86.15	...Fluid pressure operator	123	..With auxiliary retainer
86.16	..With laterally movable grapple support	124	..Latch release
86.17	..With releasing means	125	..Combined harpoon and fork
86.18	...Excessive force-responsive	126	..Harpoon
86.19	...Spring release means	127	..Mechanically spread barbs
86.2	...Grappling means latched in release position	128	...Multiple
		129	...Latch release
		130	...Latch release
86.21	Lateral pocket and lug	131	SHIELD DEVICES
86.22	...Screw-threaded	137	ARTICLE CARRIER GRIPPED AND CARRIED BY HAND
86.23	..With impact means	138	..Including means to cover book or sheet
86.24	..Expanding grapple means	139	..Including support for optical instrument (e.g., camera holder)
86.25	...Cammed grappling means	140	..Carrier for person
86.26	..Contracting grappling means (e.g., overshot)	141	..Convertible to, or useable as, different device or different type carrier
86.27	...Inwardly biased grappling means with trip	142	..Having means for supporting or mounting carrier
86.28	...Outwardly biased grappling means	143	...Having plural receivers or supports for plural articles (e.g., rack)
86.29	...Pivoted grappling means	144	...Tray
86.3	...Cammed grappling means	145	..Configured for complimentary projections on package or article
86.31	...Inwardly biased grappling means	146	..Having plural diverse receivers or supports for diverse articles
86.32	...Resilient grappling means	147	..Including receiver or support for ski
86.33	...Shoulder-engaging	148	..Including helical spring or elastic material for engaging or supporting article
86.34	..Including washover or outover means	149	..Having flaccid receiver, support or fastener for article
87.1	..Multiple grapples for multiple objects	150	..Including means to tighten flaccid member about article
87.11	..Confection stick handling (e.g., popsicle stick)	151	..Including rigid, semirigid or reinforced panel
87.12	..Egg handler	152	..Having plural handles connected by flaccid receiver or support (e.g., sling)
87.2	..Groove- or shoulder-engaging type	153	..And rigid handle or bar
87.22	...Pivoted jaws	154	...Plural discrete flaccid supporting members suspended from handle or bar at spaced points
87.24	...Link- or lever-operated	155	And connected by cross-strap or brace (e.g., harness)
87.26	...Slidable jaws	156	...Single web or strap (e.g., sling)
87.28	...Rigid type	157	..Having parallel flaccid members forming article support
88	..Magnet- or piston-controlled	158	..Carrier component positioned in aperture in article
89	..Lewises	159	..Having plural discrete receivers or supports for spaced articles
90	..Collar-engaging	160	..Separable supports
91	..Rigid yoke		
92	..Rigid gripper		
93	..Expanding		
94	..Cam-spread jaws		
95	...Pivoted		
96	...Slip wedge		
97	..Pivoted		
98	...Hayfork type		
98.1	..Inflatable		
99.1	..Resilient jaws		
99.2	..Hand-held (e.g., tweezer, tongs)		
100	..Separate sliding operator		
101	..Pivoted cam and hook		
102.1	..Socket and slip wedge		
102.2	..Well pipe elevator		
103.1	..Fixed and moveable jaw		
103.2	..Coil gripper		

JUNE 1985

ARTICLE CARRIER GRIPPED AND CARRIED BY
HAND

- .Having plural discrete receivers or supports for spaced articles
- 161 ..Vertical array
- 162 ..Having movably mounted or separable means to retain articles
- 163 ...Common to plural receivers or supports
- 164 .Article gripping or retaining means actuated by lifting carrier
- 165 .Including means to release article or to fasten carrier to or around article
- 166 ..Resiliently biased
- 167 .Support or receiver movably, removably, or adjustably mounted to handle or handle portion (e.g., collapsible)
- 168 ..Having slidable sections
- 169 ..Having pivoted sections
- 170 .Including handle having article or cord engaging means depending at each end
- 171 .Having cord or bail accommodating groove or passage along length of handle
- 172 .Tray

CROSS-REFERENCE ART COLLECTIONS

- 901 PLATE LIFTING CLAMP
- 902 GRIPPING ELEMENT
- 903 BATTERY CARRIER
- 904 VEHICLE CARRIER
- 905 WIRELESS REMOTE CONTROL DEVICE
- 906 ATOMIC FUEL HANDLER
- 907 SENSOR CONTROLLED DEVICE

238

BEST COPY AVAILABLE

JUNE 1985

1	EDUCATIONAL OR CONSTRUCTION UNITS OR KITS	358	...Ceramic composition (e.g., barium titanate)
300	NON-DYNAMOELECTRIC	359	More than one poling direction (e.g., Rosen transformer)
301	..Nuclear reaction		
302	..Contact potential difference	360	..Rotation of crystal axis (e.g., cut angle)
303	..P-N semiconductor		
304	..Secondary electron emission	361	...Quartz
305	..Direct charge particle emission	362	...Rochelle salt
306	..Thermal or pyromagnetic	363	..Electrode materials
307	..With heat actuated bimetal element	364	...Multilayer
308	..Charge accumulating	365	..Electrode arrangement
309	..Electrostatic	366	...More than two
310	..Friction	367	..Piezoelectric element shape
311	..Piezoelectric elements and devices	368	...Rectangular plate
312	..Adding or subtracting mass	369	...Circular disc, ring, or cylinder
313 R	..Surface acoustic wave devices	370	... "U" or "tuning fork" shape
313 A	Orientation of piezoelectric material	371	...Sphere or hemisphere
		10	DYNAMOELECTRIC
313 B	Interdigitated electrodes	11	..Conducting fluid
313 C	Envelope or apodized	12	..Linear
313 D	Grating or reflector in wave path	13	..Fixed and movable wound elements
314	..Electrical systems	14	..Solenoid and core type
315	...Temperature compensation circuits	15	..Reciprocating
316	...Input circuit for simultaneous electrical and mechanical output from piezoelectric element	16	..With cooling or temperature modification
		17	..With other elements
317	...Input circuit for mechanical output from piezoelectric element	19	...Speed control or time delay
318	...Input circuit for electrical output from piezoelectric element	20	...Motion-converting mechanism
		21	Pivoted or flat-spring armature
319	...Electrical output circuit	22	Plural armatures
320	..Piezoelectric slab having different resonant frequencies at different areas	23	Solenoid and core type
		24	Plural cores
		25	..Reed type
321	..Combined with resonant structure	26	..Magnetostrictive
322	...Acoustic wave type generator or receiver	27	..Fixed and movable wound elements
		28	..Direct-connected
323	...Direct mechanical coupling	29	...Pivoted or flat-spring armature
324	...Diaphragm	30	...Solenoid and core
325	...Sandwich or Langevin type	31	..Self-actuated interrupter
326	..Combined with damping structure	32	...Pivoted or flat-spring armature
327	...On back of piezoelectric element	33	Plural armatures
328	..With mechanical energy coupling means	34	...Solenoid and core
329	...Including inertia type operator	35	...Successively energized solenoid coils
330	...Bending type	36	..Oscillating
331	Plural elements	37	..With motion-converting mechanism
332	Multimorph	38	..Direct-connected
333	...Shear or torsional type	39	..With interrupter
334	...Acoustic wave type generator or receiver	40 R	..Rotary
		40 MM	..Miniature motors
335	With lens or reflector	40.5	..Self-nutating or moving (e.g., oscillating fan, etc.)
336	Nondestructive testing type		
337	Underwater type	41	..With mechanical starters
338	...Force or pressure measuring type	42	..With assembling, metal casting or machining feature
339	...Voltage, spark or current generator		
340	..Encapsulated or coated	43	..Molded plastic
341	..With temperature modifier and/or gas or vapor atmosphere control	44	..Powdered metal
		45	..Impregnated or coated
342	...For plural piezoelectric elements	46	..Magnetic motors
343	...With heating element	47	...Portable or hand tool (e.g., dry shavers)
344	...Sealed unit		
345	..Supported by elastic material	48	...With other elements
346	..With temperature compensating structure	49 R	...Step-by-step
		49 A	Claw-tooth and printed circuit components
347	...Compensated air gap		
348	..With mounting or support means	50	..Portable or hand tool
349	...Air gap	51	..Vibration or noise suppression
350	Adjustable	52	..Cooling or fluid contact
351	...Suspended by thin member	53	...With control means
352	Point contact on major surface only	54	...Liquid coolant
353	Contact at edges only	55	...Nonatmospheric gas
354	...Clamped	56	...With gas purification or treating
355	Spring bias	57	...Intermediate confined coolant
356	90 degrees to major surface and margin clamped only	58	...Circulation
		59	Plural units or plural paths
357	..Orientation of piezoelectric polarization	60 R	Self-forced
		60 A	Hollow passages
		61	Rotor passage

	DYNAMOELECTRIC	110	Impedance
	..Rotary	111	..Generated wave-form modification
	..Cooling or fluid contact	112	..Plural units, structurally united
	...Circulation	113	...Motor-generator sets
	Self-forced	114	...Plural rotary elements
62	Suction pump or fan	115	...Field and armature both rotate
63	Pressure pump or fan	116	...Limited movement
64	Heat-exchange structure	117	Mechanical bias
65	Spacers (e.g., laminae, coils, etc.)	118	...With interconnecting drive mechanism
66	..With other elements	119	Fluid-drive mechanism
67 R	...Inbuilt or incorporated unit	120	Friction-drive mechanism
67 A	Bicycle-hub generators	121	Mechanically controlled element
68 R	Electric circuit elements	122	By additional dynamoelectric machine
68 A	Manually operable (e.g., switches, rheostats, etc.)	123	Friction brake
68 B	Condition responsive (e.g., position, torque, etc.)	124	...Plural short-circuited rotary elements
68 C	Temperature, current-responsive, i.e., protectors	125	Squirrel cage type
68 D	Conversion elements, (e.g., transformers, rectifiers, etc.)	126	...Plural armatures in common field
68 E	Motion responsive (e.g., centrifugal switches)	127	...Plural collector-type machines
69	Shaft-driven switch (e.g., blasting generators)	128	...Commutator and slip-ring type
70 R	Distributor or timer (e.g., ignition magnetos)	129	...Synchronous or rotary converter
70 A	Ignition systems	130	For plural wire D.C. system
71	Connectors, terminals or lead-ins	131	Different armature circuits
72	Impedance devices	132	Polyphase armature winding
73	Illuminating devices	133	Common armature winding
74	Inertia or fly-wheel device	134	With plural field windings
75 R	...Drive mechanism	135	Commutator in field circuit
75 A	Spring or gravity drive	136	...Plural commutator type
75 B	Hand- or foot-operated	137	Double current D. C. machines
75 C	Rim drive (e.g., bicycle generator drive by wheel, rim, or tire)	138	Dynamotor type
75 D	Flexible shaft or coupling and hollow shaft drive	139	Hetero-axial excitation
76	Brake and clutch	140	Plural armature windings
77	Brake	141	Plural field windings
78	Clutch	142	Plural field windings
79	Shaft and armature timing or phasing connection	143	...Plural slip-ring sets
80	Motion conversion	144	Plural armature windings
81	Unbalanced weight (e.g., vibrators)	145	Plural sets of poles
82	Swash plate	146	Polyphase windings
83	Gearing	147	Slip rings in field circuit
84	Impulse coupling	148	...Plural sets of brushes
85	Mechanical shields or protectors	149	Plural field windings
86	Shield in air gap	150	Polyphase arrangement
87	Submersible	151	Short circuiting conductor between brushes
88	Dirt, moisture or explosion proof	152	..Permanent magnet machines
89	Housings, windows or covers	153	...Inbuilt with flywheel (magneto)
90	Bearing or air-gap adjustment or bearing lubrication	154	...Permanent magnet stator
91	...Supports	155	Inductor type
92	..Torque-transmitting clutches or brakes	156	...Permanent magnet rotor
93	...Brake type	157	..Vertically disposed
94	...Automatic control	158	..Universal (A.C. or D.C.)
95	By speed	159	..A.C.
96	With other drive mechanism	160	...Frequency converters
97	Output bias or resistance device	161	...Phase-shifter type
98	Drive motor	162	...Synchronous
99	Gearing	163	Reaction type
100	Mechanical clutch	164	Toroidal coil
101	Plural units	165	D.C. excited
102 R	...Generator-motor type	166	...Induction
102 A	Homopolar clutches	167	With repulsion-starting
103	Magnetic field type	168	Inductor-type generators (variable reluctance)
104	With air-gap shield	169	High frequency
105	Induced or eddy current type	170	Multifrequency
106	Magnetic reluctance feature	171	Induction generators
107	With collection means for induced current	172	Shifting field (e.g., shading pole)
108	Delivery to external device	173	...Commutated
109	Electric motor	174	Single phase
		175	Conduction operation
		176	Transformer operation
		177	..D.C.
		178	...Homopolar
		179	...Windings and core structure
		180	...Field or excitation windings or structure
		181	Combined permanent and electromagnet

JUNE 1985

DYNAMOELECTRIC
 ..Rotary
 ..Windings and core structure
 ...Field or excitation windings or structure
 182 With short-circuited winding or conductor
 183 Damper winding
 184 Plural field windings
 185 Plural sets of poles
 186 Interpole, compensating or neutralizing poles
 187 Slotted or divided pole
 188 Differentially related
 189 Variable length or tapped winding
 190 Magnetic shunts for shifting field flux
 191 Adjustable magnetic structure
 192 Nonmagnetic inserts or air gaps
 193 Nonuniform core cross section
 194 Coil supports and spools
 195 Armature or primary
 196 Corona-prevention
 197 With short-circuited winding or conductor
 198 Plural windings
 199 Combined stationary and rotary
 200 Variable length or tapped windings
 201 Bar windings
 202 Open windings
 203 Closed windings
 204 Equalizers
 205 Multiplex
 206 Lap
 207 Wave
 208 Coils
 209 Adjustable magnetic structure
 210 Secondary windings or conductors
 211 Squirrel cage
 212 Inherently variable impedance (double squirrel cage)
 213 Antiparasitic conductors (imbricated)
 214 Coil retainers or slot closers
 215 Slot liners
 216 Core features
 217 Securing laminae
 218 Pole assembly and securing means
 219 Current collectors
 220 Spark-reduction
 221 Arc extinguishers
 222 Spark-neutralizing current
 223 Flux compensators
 224 Commutating poles or windings
 225 Short-circuited coil circuit
 226 Field-distortion
 227 With cooling
 228 With cleaning, lubricating, resurfacing or repairing
 229 Brush-traversing
 230 Circumferential brush shifting on reversal
 231 Rotary structure
 232 Slip rings
 233 Commutators
 234 Winding connectors
 235 Molded support
 236 Cylindrical or drum
 237 Disc
 238 Fixed structure
 239 Brush holders or rigging
 240 Brush-lifting
 241 Circumferential adjustment
 242 Brush engagements or guides
 243 Fluid pressure-operated
 244 Brush affixed to pivoted arm
 245 Slidable brush
 246 Pressure arm
 247 Axial spring

248 Brushes
 249 With electrical connector
 251 Structure (e.g., composite material)
 252 With composition feature
 253 Carbonaceous
 254 Stator structure
 255 For railway-type machines
 256 Stray field flux loss prevention
 257 Interfitting or claw-tooth stators
 258 Frame and core type
 259 Core assembly
 260 End turn supports
 261 Rotor structure
 262 High-speed rotor type
 263 Interfitting or claw tooth rotors
 264 Armatures
 265 Drum
 266 Hollow (e.g., double air gap)
 267 Ring
 268 Disc
 269 Salient pole
 270 End turn supports
 271 Banding
 272 Elements
 273 Miscellaneous

CROSS-REFERENCE ART COLLECTION

800 PIEZOELECTRIC POLYMERS (E.G., MYLAR, PVDF)

DIGESTS

DIG 2 Hysteresis rotors and motors
 DIG 3 Hall effect generators and converters
 DIG 6 Printed-circuit motors and components

JUNE 1985

1	ELECTRIC MOTOR WITH NONMOTOR DRIVING MEANS (E.G., AXLE DRIVE, MANUAL DRIVE)	599	.Pulse-width modulated power input to motor (e.g., "duty cycle" systems)
2	.Manual driving means	600	.Digital or numerical systems
3	WITH PARTICULAR MOTOR-DRIVEN LOAD DEVICE	601	..Digital comparison
4	.Plural, diverse or diversely controlled load device	602	...Commutating switch-type encoder
5	..Plural motor drive	603	..Pulse-counting systems
6	.Tension-maintaining type of motor-control system	604	..Analogue comparison
7	..Plural, diverse or diversely controlled motors	605	...Synchro or resolver (e.g., transmitter simulators)
8	.Plural, diverse or diversely controlled driving motors (e.g., driving differential gearing)	606	.Frequency- or phase-modulated systems
9	.Power- or motion-transmitting mechanism	607	..Frequency comparison
10	..Reversible drive mechanism	608	..Phase comparison
11	..Variable speed mechanism	609	..Reset systems (P.I.)
12	...Gearing	610	..With rate (P. I. D.) (e.g., reset windup prevention)
13	Differential type	611	.With stabilizing features (e.g., anti-hunting, damping)
14	..Motion-converting mechanism	612	..Electric braking near balance (e.g., dynamic)
15	..Mechanical gearing	613	...D.C. in A.C. windings
16	SUPPLIED OR CONTROLLED BY SPACE-TRANSMITTED ELECTROMAGNETIC OR ELECTROSTATIC ENERGY (E.G., BY RADIO)	614	..Friction-braking near balance including magnetic or eddy current brakes
17	PORTABLE-MOUNTED MOTOR AND/OR PORTABLE-MOUNTED ELECTRICAL SYSTEMS THEREFOR	615	..By auxiliary feedback loop
560	POSITIONAL SERVO SYSTEMS (E.G., SERVOMECHANISMS)	616	...Rate feedback
561	.Adaptive or optimizing systems including "bang-bang" servos	617	Variable rate feedback
562	.Time-sharing or multiplexing systems	618	Tachometer feedback
563	.With protective or reliability increasing features (e.g., "fail-safe" systems)	619	..Variable gain bandwidth
564	..Redundant operating channels	620	..Nonlinear circuits
565	..Monitoring systems	621	..Lead or lag networks
566	..Maneuver, force, or load-limiting	622	...A.C. networks
567	.Program- or pattern-controlled systems	623	..Load stabilization (e.g., viscous, magnetic or friction dampers)
568	..With program recording or composing means	624	..By deadband at null (e.g., threshold circuits)
569	..Digital or numerical systems	625	.Plural servomotors
570	..Contouring systems	626	.Limit or end-stop control
571	With "feed-rate" control	627	..Secto-scanning systems
572	With "zero-offset" or tool radius correction	628	..Feedback systems
573	With interpolating means	629	.Unwanted harmonic or voltage component elimination quadrature rejection systems
574	...Multiple axes point to point systems	630	.Antibacklash systems (e.g., with unidirectional approach to balance)
575	..Multiple axes analog systems	631	.Antistatic friction features (e.g., "dither" voltage)
576	...Nonmechanical line, seam or edge followers	632	.With compensating features
577	Optical or photoelectric line followers	633	..Two-cycle error compensation
578	...Cam or template followers	634	..Temperature compensation
579	...Multiple pass systems	635	.With signal-, voltage-, or current-limiting
580	.Vehicular guidance systems with single axis control	636	..Sampling systems including miscellaneous "sampled data" control systems
581	..Radio-controlled	637	.Analog computation
582	..Celestial navigation	638	.With particular "error-detecting" means
583	..Landing systems	639	..Plural, diverse conditions
584	..Altitude or pitch control	640	..Photoelectric or optical-type measuring instruments
585	..Roll control	641	..With particular temperature measuring instrument
586	..Yaw control	642	..With liquid level measuring instruments
587	..Land vehicles	643	..With moisture content or wetness measuring instruments
588	..Marine vehicles	644	..With flow measuring instruments
589	...Submarine and torpedo systems	645	..With fluid pressure measuring instruments
590	.Multiple mode systems	646	..With force or weight measuring instruments
591	..With mode-engagement features (e.g., manual to automatic)	647	..With magnetic field measuring instruments
592	..Fine and coarse systems	648	..With inertial, direction or inclination measuring instrument
593	...Separate fine and coarse motors	649	...Stable platforms
594	...Digital systems	650	..With current, voltage or electrical power measuring instruments
595	...Multiple speed synchro systems		
596	..Combined "on-off" and proportional control		
597	..Slewing systems		
598	...With a separate slewing motor		

	POSITIONAL SERVO SYSTEMS (E.G., SERVOMECHANISMS)	42	..Between windings on auxiliary dynamo-electric machines
651	..With particular "error-detecting" means	43	..D.C. or A.C. commutator motors with slip rings
652	..With acceleration measuring instruments	44	..Between induction motor secondaries
652	..With particular position measuring instruments	45	..Mechanically coupled in fixed ratio of movement
653	...Magnetic transducers	46	..Motors having unlike operating characteristics
654	...Synchro control transmitter-transformer systems	47	...Synchronous and nonsynchronous motors
655	With synchro differential	48	..Mechanically coupled in torque opposition
656	...Differential transformer systems	49	..Motors electrically connected in cascade or tandem
657	...Linear differential transformer	50	..With means for effecting other motor interconnections
658	"E" type transformer	51	..Plural, diverse motor controls for different motors
659	"Microsyn" type	52	..Slipping and/or racing control for electric motors
660	"Inductosyn" systems	53	..Plural, diverse motor controls
661	Resolver systems	54	..Motor-reversing
662	...Variable capacitor systems	55	...With running-speed control
663	...Potentiometer systems including autotransformers and Wheatstone bridges	56	And braking
664	Minor arc seeking	57	And braking
665	Continuous rotation, unlimited range	58	...And acceleration control
666	Controlled tap and slidewire	59	..Running-speed control
667	With a bridge in the feedback circuit	60	And braking
668	Recalibrating systems	61	...And acceleration control
669	...Standing wave	62	...And automatic starting and/or stopping and/or with time delay
670	...Contact resistance	63	..Braking
671	..With particular motor control system responsive to the "actuating signal"	64	..Acceleration control
672	..Discontinuous or "on-off" control	65	..Motor-reversing
673	..Seeking switch type	66	..Running-speed control
674	..Wheatstone bridge type	67	..Diverse speeds for different motors
675	..One transmitter or controller element follows another	68	..Relative motor speed control
676	..Transmitter or controller element returned (e.g., force balance systems)	69	...With speed-difference detector
677	..With particular servoamplifier	70	Electrical-type detectors
678	...Differential amplifier	71	Voltage and/or current difference detector
679	...Diverse types of amplifiers in different stage	72	Dynamoelectric machine detector
680	...Magnetic servoamplifiers	73	Synchronously operated impedance detectors
681	...Solid-state servoamplifiers	74	Synchronously actuated switch detectors
682	...Rotating amplifier (e.g., "Ward Leonard" control)	75	Plural switches connected in series
683	..With particular phase discriminator	76	Differential-gearing detector
684	..With particular modulator or detector (e.g., choppers)	77	...Controlling motor speed in response to speed of another motor
685	.. "Step-by-step" motors in closed-loop servos	78	Controlling A.C. frequency or rate of electrical impulses to other motor
686	..Reciprocating or oscillating motors	79	...Control of both armature (or primary) and field (or secondary) circuits
687	..Linear movement motors	80	...Armature or primary circuit control
688	..Shaded pole motors	81	...Field secondary circuit control
689	Torquing motors	82	...Armature or primary circuit control
690	SELF-SYNCHRONOUS TYPE OF MOTOR	83	...Series-parallel armature circuit connections
691	..With means to amplify transmitter signals	84	..Field or secondary circuit control
692	..Having induction or "selsyn" type transmitter	85	..Synchronizing or phasing control
693	..Having impedance-type transmitter	86	..Braking
694	..Having commutated dynamoelectric machine transmitter	87	..Motor used as braking generator (dynamic braking)
695	..Having commutating switch-type transmitter	88	...Load or current division during braking
696	OPEN-LOOP STEPPING MOTOR CONTROL SYSTEMS	89	...Motor as exciter for another motor
34	PLURAL, DIVERSE OR DIVERSELY CONTROLLED ELECTRIC MOTORS	90	..Acceleration control
35	..Motors with diverse motions (e.g., reciprocating and rotary motors)	91	..Accelerating motors in succession or selectively
37	..Plural reciprocating or oscillating motors	92	..Control of both armature (or primary) and field (or secondary) circuits
38	..Plural linear-movement motors	93	...Series-parallel connected armature or primary circuits
39	..Work and feed motors (e.g., indexing)	94	..Armature or primary circuit control
40	..Motor biased against rotation	95	...Series-parallel connections
41	..Having electrical synchronizing interconnections		

JUNE 1985

PLURAL, DIVERSE OR DIVERSELY CONTROLLED	142	..Responsive to diverse conditions or with time-delay means
ELECTRIC MOTORS		...Plural electrical conditions
..Acceleration control	143	..Armature or primary current of motor
..Armature or primary circuit control	144	..Terminal voltage or counter e.m.f. of motor
...Series-parallel connections	145	..Speed of motor or driven device
...With armature circuit impedance		..Speed or frequency of generator or its drive means
..Field or secondary circuit control	146	..Alternating-current-motor system
..Load control	147	..With plural, diverse or diversely controlled generators
..Fixed ratio of load or current division	148	..With flywheel on generator or on motor
...By field or secondary circuit control	149	..Control of both the generator and the circuit to the motor
..Starting and/or stopping		..With motor control
..Sequential or successive starting and/or stopping	150	..Control of both the generator and the motor
..Selective starting and/or stopping	151	..Control of excitation (field) circuit of both
..Armature (or primary) circuit control	152	..Plural, diverse or diversely actuated, generator control means
..Plural, diverse or diversely controlled sources of armature (or primary) supply	153	..Generator speed control
106 ..Diverse sources	154	..Generator field circuit control
107 ...A.C. and D.C.	156	HAVING ROTOR ELEMENT BIASED AGAINST ROTATION
108 ...Different voltages		..By resilient biasing means (e.g., spring)
109 ...Different voltages	157	WITH FLYWHEEL OR MASSIVE ROTARY MEMBER CONTROL BY PATTERNS OR OTHER PREDETERMINED SCHEDULE MEANS
110 ...Different frequencies	158	..Motor running-speed control
111 ..Series-parallel connected motors	159	..Cyclically varying or repeated speed schedules
112 ..Parallel connected motors		SYNCHRONOUS MOTOR SYSTEMS
113 ..Series connected motors	160	..Hysteresis or reluctance motor systems
114 IMPACT, MECHANICAL SHOCK, OR VIBRATION-PRODUCING MOTORS		..Antihunting or damping
115 MOTOR WITH DIVERSE MOTIONS (E.G., ROTARY AND RECIPROCATING)	161	..Braking
116 NONMAGNETIC MOTOR	162	..Pole changing motor winding circuits
117 ..Thermoelectric motor	163	..Synchronization systems
118 MAGNETOSTRICTIVE MOTOR	164	..With armature power removal upon failure to synchronize or loss of synchronism
119 RECIPROCATING OR OSCILLATING MOTOR	700	...Upon failure to resynchronize
120 ..Stopping after predetermined number of reciprocations or cycles (including single cycle)	701	...Responsive to thermal electrical element in system
121 ..Having means to produce a progressing or traveling motor field flux	702	..Having different armature voltage prior to synchronism
122 ..Plural, diverse or diversely controlled motor windings	703	..With d.c. field removal
123 ..Polyphase or diverse or diversely controlled sources of motor supply	704	...With electronic control element in system
124 ...A.C. and D.C. sources	705	..With field excitation application
125 ..Unidirectionally conductive devices in energizing circuit	706	...Responsive to slip voltage frequency in d.c. field winding
126 ..Energizing winding circuit control	707	...Responsive to armature current
127 ..Automatic in response to predetermined position, movement or condition in or of the motor or driven device	708	...Responsive to rotor speed or rotor driven member
128 ...Noise, sound, vibration, movement or position of motor	709	..Field winding circuits
129 ..By means for producing periodic electrical pulses in the energizing circuit	710	..Responsive to a motor condition
130 ...Electrical oscillation or condenser charging and/or discharging circuits	711	...Induced voltage in field winding
131 ...Motor or escapement-controlled means	712	...Speed responsive field power sources
132 ..By space-discharge or unidirectionally conductive devices in energizing circuit	713	..Armature winding circuits
133 ..By impedance devices in energizing circuit	714	..Responsive to rotor shaft position or speed
134 ..By circuit making and/or braking devices	715	..Having electronic power conversion circuit
135 LINEAR-MOVEMENT MOTORS	716	..Having variable frequency supply
136 AUXILIARY MEANS FOR PRODUCING MECHANICAL STARTING OR ACCELERATING TORQUE	717	..Having a plurality of windings or winding portions
137 ..By auxiliary motor	718	REPULSION MOTOR SYSTEMS
138 SPACE-DISCHARGE-DEVICE COMMUTATED MOTOR	719	..With added motor winding or convertible to series motor
139 BATTERY-FED MOTOR SYSTEMS	720	INDUCTION MOTOR SYSTEMS
140 GENERATOR-FED MOTOR SYSTEMS HAVING GENERATOR CONTROL	721	..Repulsion start
141 ..Automatic generator control and/or with time-delay means	722	..Power-factor control
	723	..With plural separately movable rotors
	724	..With voltage source connected to motor secondary
	725	
	726	
	727	
	728	
	729	
	730	
	731	

INDUCTION MOTOR SYSTEMS		781	...Operating from a single phase source
	..With voltage source connected to motor secondary	782	With protective features
732	..Electronic device controls current in secondary circuit	783	Thermal starting and thermal overload protection
733	..Commutator connected to secondary winding	784	Impedance for reducing current during starting operation
734	..Slip rings connected to secondary winding	785	Start winding removed during running operation
735	...Rotor shaft coupled to dynamoelectric machine	786	By electronic switch
736	Slip rings connected to dynamoelectric machine winding	787	With transformer for sensing the run winding current
737	..Self-cascaded motor windings	788	With variable temperature coefficient resistor in switch control circuit
738	..With commutated winding	789	By electromagnetic switch
739	..Reversing	790	With relay coil in series with main winding
740	..With diverse motor operation	791	By thermal switch
741	...With braking	792	With variable temperature coefficient impedance element
742	Electromagnetic brakes	793	By centrifugal switch
743	Generator action	794	Capacitor run motor with different capacitance at starting
744	Plugging	795	With plural capacitors
745	..With controlled saturable reactor in primary circuit	796	Saturable winding in capacitor run motor circuit
746	...Two phase motor	797	Phase splitting using stator winding mutual inductance or saturable winding
747	...Two phase motor	798	..Responsive to motor condition
748	...With plural primary windings or winding portions having common connection	799	..Responsive to speed or rotation phase angle
749	..Operating from a single phase source	800	With controlled power conversion
750	..Shaded pole motor	801	Including inverter
751	...Split phase motor with capacitor interchangeably connected in series with either primary winding	802	Responsive to an additional condition
752	With controlled electronic device to provide the series connection	803	With controlled a.c. to d.c. circuit in inverter supply
753	...With de-energizable start winding	804	With controlled magnetic reactance
754	With separate winding or winding portion energized for each direction of rotation	805	...Responsive to motor voltage
755	Automatic current reversal on start winding	806	..Condition responsive
756	..With controlled electronic switch for phase reversal	807	..Frequency control
757	..Braking	808	...With voltage magnitude control
758	..With diverse operation	809	...With voltage phase angle control
759	..Dynamic braking	810	...With voltage pulse time control
760	...Direct current primary winding braking circuit	811	Pulse width modulation or chopping
761	Rotating rotor controls braking current in primary winding	812	..Voltage control
762	With a.c. to d.c. conversion circuit	813	...With transformer
763	...Reversal of power to primary winding	814	...With impedance control
764	...Three phase power reversal	815	Saturable reactor
765	..Eddy current braking circuits	816	...Single phase, split phase motors
766	..Primary and secondary circuits	817	With capacitor
767	..Primary circuit control	818	..Secondary circuit control
768	...Three phase motor operated from single phase source	819	..Open secondary member or portion thereof with means to open or close the circuit thereto
769	...With dynamoelectric converter	820	..Closed secondary member or member portion with means to change electrical characteristics thereof
770	..Dual voltage motors	821	..Impedance control of secondary circuit
771	..Delta-ye, plural yye, or plural delta connected primary windings	822	...Responsive to motor condition
772	..Plural speed	823	Rotor speed or position responsive
773	...Pole changing	824	Centrifugal force of rotor controls secondary circuit impedance
774	Single phase motor	825	Induction motor current
775	Separate primary running winding for each pole number, alternately energized	826	Primary motor current
776	Entire primary running winding energized for each running speed	827	Frequency of secondary current
777	Separate primary running winding for each pole number, alternately energized	828	Secondary voltage
778	..Starting control	829	...By manual operation
779	...With speed control	830	..With relatively movable cooperating motor parts to control energized motor
780	...Three phase motor with variable transformer to initially adjust voltage to motor windings	831	..Axially movable cooperating parts
		832	..Dual stators, one or both angularly movable
		244	ALTERNATING CURRENT COMMUTATING MOTORS
		245	..Universal or A.C.-D.C. motors
		246	SERIES MOTORS

JUNE 1985

247	SERIES MOTORS	297	..Plural, diverse or diversely controlled field windings
248	..Convertible for nonseries motor operation	298	...Simultaneous energization
248	..With plural, diverse or diversely connected or controlled sources of e.m.f.	299	With means for short-circuiting a winding
249	..Control by motor circuit impedance	300	..Field-circuit current reversed
250	..Impedance in series with field windings and in parallel to armature winding	301	RUNNING-SPEED CONTROL
251	..Field circuit control	302	..Controlling driven load and/or braking
252	..Plural, diverse or diversely connected or controlled field coils	303	..Electric generator as auxiliary load or as brake
253	HOMOPOLAR OR UNIFORM FIELD MOTORS	304	..Friction braking
254	SELF-COMMUTATED IMPULSE OR RELUCTANCE MOTORS	305	..Plural speeds, with plural speed-selecting means (e.g., push buttons for different speeds)
255	PLURAL DIVERSE MOTOR CONTROLS	306	..Automatic and/or with time-delay means
256	..Motor-reversing	307	..Antihunting
257	..With running-speed control	308	..Plural diverse conditions or with time delay means
258	...And braking	309	..Speed of motor or driven device
259	And acceleration control	310	...With respect to a master or reference device
260	And acceleration control	311	With speed-change or speed-difference detector
261	..With braking	312	Electrical-type detector
262	...And acceleration control	313	Light or photosensitive
263	..With acceleration control	314	Electrical phase difference
264	..With automatic starting and/or stopping	315	Electrical magnitude difference
265	...Stopping upon predetermined movement of or position of motor or driven device	316	Of opposed magnetic fluxes
266	At limit-of-travel of motor or driven device	317	Of voltage and/or currents
267	Dual control circuits alternately energized	318	Of electrical frequencies
268	..Running-speed control	319	Dynamoelectric machine detector
269	..With braking	320	Both field and armature structure rotatable
270	...And acceleration control	321	Synchronously operated switches
271	..With acceleration control	322	Plural switches connected in series
272	..With automatic starting and/or stopping	323	Differential-gearing detector
273	..Motor braking	324	Threaded male and female members
274	..With acceleration control	325	...Centrifugally operated device type
275	..With automatic starting and/or stopping	326	...Tachometer-type detector
276	..Acceleration control	327	...Electric generating
277	..With automatic starting and/or stopping	328	...Alternating current generator
278	...In response to an electrical condition	329	..Speed or frequency of a master or standard device
279	Automatic stopping means less responsive during acceleration	330	..Circuit making and breaking device
280	MOTOR-REVERSING	331	..Terminal counter e.m.f. or armature voltage of the motor
281	..Periodic- or intermittent-reversing	332	..Motor load
282	..In response to movement or position (e.g., limit of travel) of motor or driven device	333	..Electrical conditions in circuit other than that of motor being controlled
283	..Automatic and/or with time-delay means	334	..Thermal condition
284	..With means to delay reversing until motor substantially stops	335	..Fluid or granular material pressure and/or level
285	..Instant of, or passage or predetermined time or having time-delay means	336	..Plural, diverse or diversely controlled motor controls
286	..Movement or position of motor or driven device	337	..Control of both motor structure and motor circuit
287	..Armature or primary circuit control	338	..Control of both motor field circuit and motor armature circuit
288	..Plural, diverse or diversely controlled armature windings	339	..Armature or primary circuit control
289	...Phase-reversal	340	..Plural, diverse or diversely controlled armature windings
290	...Selectively energized windings	341	..Circuit frequency or impulse control
291	..Armature or primary current reversal	342	..Circuit voltage control
292	...By shifting motor brushes or selecting appropriate set of brushes	343	...Series-connected bucking or boosting e.m.f.-controlled
293	...Reversing polarity of current supplied to armature circuit	344	...By voltage and/or current transformer or converter
294	Wheatstone bridge type	345 R	..By space-discharge device in armature circuit
295	Potentiometer-controlled	345 A	Feedback
296	..Field circuit control	345 C	Silicon-controlled rectifier
		345 CA	Counter e.m.f.
		345 CB	A.C. motors
		345 AB	Counter e.m.f.
		345 B	Transistors
		345 D	Triac

JUNE 1985

	RUNNING-SPEED CONTROL	391	...Time-delay or time-controlled
	.Armature or primary circuit control	392	..In response to plural, diverse conditions and/or with time-delay means
	..By space-discharge device in armature circuit		...Responsive to conditions in or of the motor or the driven device
345 E	Digital control	393	...Armature or primary circuit
345 F	Diodes and/or transistors	394	Current magnitude
345 G	Silicon-controlled rectifiers	395	...Movement or rate of movement or position of motor or driven device
345 H	Triac	396	Speed or acceleration
346	..By armature circuit-making and/or breaking	397	Tachometer detector
347	..By armature circuit impedance	398	..In response to thermal conditions
348	..Plural, diverse or diversely controlled impedances	399	..With time-delay or time-controlled means
349	...Resistor	400	...Pilot motor or servomotor
350	.Field or secondary circuit control	401	...Dash-pot device
351	..Plural, diverse or diversely controlled field windings	402	...Electromagnetic or inductive time-delay
352	...Convertible-number-of-poles type of motor	403	..Plural, diverse or diversely controlled acceleration control means
353	...Including a series field winding	404	..Control of both armature (or primary) circuit and field (or secondary) circuit
354	..Variable-length field winding	405	...Control of field subsequent to armature
355	..Additional e.m.f. in field circuit	406	.Armature (or primary) circuit control
356	..By space-discharge device in field circuit	407	..Plural, diverse or diversely controlled armature windings
357	..Impedance-controlled	408	...Series-parallel
358	...Resistor	409	..Circuit voltage control
359	Short-circuiting	410	...Plural, diverse or diversely controlled sources of e.m.f.
360	.Motor structure control	411	Series-parallel
361	..Current-collecting mechanism (e.g., brushes)	412	Connected in series, aiding and/or opposing
362	BRAKING	413	...Electrical converter (e.g., transformer) as variable voltage source
363	..Spotting" or adjustment of braking controller during coasting	414	..Circuit frequency control
364	..Automatic and/or with time-delay means	415	..By means of space-discharge devices in armature circuit
365	..Plural diverse conditions or with time delay	416	..By impedance devices in armature (or primary) circuit
366	..Condition of motor or driven device	417	...Plural, diverse or diversely controlled impedances
367	...Armature or primary current	418	...Inductor (inductive reactor)
368	...Armature or primary circuit voltage or terminal or counter e.m.f. voltage	419	...Resistor
369	...Speed, acceleration, movement or position of motor or driven device	420	Short-circuiting
370	..Plural, diverse or diversely controlled braking means	421	Step-by-step
371	..Including both friction braking "plugging" and/or dynamic braking	422	.Field (or secondary) circuit control
372	.Friction braking	423	..Plural, diverse or diversely controlled field windings
373	..Plugging" or application of reverse power to motor	424	...Energized in magnetic opposition
374	..Energy flow interrupted when motor stops	425	...Series-parallel
375	..Dynamic braking	426	..Plural, diverse or diversely controlled sources of e.m.f.
376	..Regenerative	427	..Impedance
377	...With additional source of e.m.f.	428	.Motor structure control
378	In series with armature or primary circuit	429	MOTOR LOAD, ARMATURE CURRENT OR FORCE CONTROL DURING STARTING AND/OR STOPPING
379	..Locally closed armature circuit	430	..Initial, "cracking" or "starting from rest" torque control
380	...Closed through impedance or the like	431	CONSTANT MOTOR CURRENT, LOAD AND/OR TORQUE CONTROL
381	...With field or secondary circuit control	432	.Control of motor load or device driven
382	..By auxiliary electric generator or by magnetic attraction or repulsion devices	433	LIMITATION OF MOTOR LOAD, CURRENT, TORQUE OR FORCE (E.G., PREVENTING OVERLOAD)
383	"ANTI-BRAKING" OR BRAKING-PREVENTION MEANS	434	NONRUNNING, ENERGIZED MOTOR
384	MOTOR ACCELERATION	435	PHASING OR ANGULAR OR LINEAR POSITIONAL CONTROL OF MOVABLE ELEMENT OF THE MOTOR
385	.Automatic and/or with time-delay means	436	POWER FACTOR CONTROL OF ARMATURE OR LINE CIRCUIT
386	..With nonautomatic control of acceleration (e.g., manual control)	437	MOTOR COMMUTATION CONTROL SYSTEMS
387	...Responsive to plural, diverse conditions and/or with time-delay means		
388	...Responsive to conditions in or of the motor or driven device		
389	In or of armature or primary circuit of the motor		
390	Armature (or primary) current		

JUNE 1985

440	HAVING PLURAL, DIVERSE OR DIVERSELY CONTROLLED SOURCES	491	CONTROL OF BOTH MOTOR CIRCUIT AND MOTOR STRUCTURE
441	.A.C. and D.C.	492	MOTOR MAGNETIC ENERGY DISSIPATION
442	.Different voltages	493	CONTROL OF BOTH ARMATURE (OR PRIMARY) CIRCUIT AND FIELD (OR SECONDARY) CIRCUIT
443	PERIODIC, REPETITIOUS OR SUCCESSIVE OPERATIONS CONTROL OF MOTOR, INCLUDING "JOG" AND "INCH" CONTROL	494	ARMATURE (OR PRIMARY) CIRCUIT CONTROL
444	.Variable periods or intervals between controlling operations	495	.Plural, diverse or diversely controlled, armature or primary windings
445	AUTOMATIC AND/OR WITH TIME-DELAY MEANS (E.G., AUTOMATIC STARTING AND/OR STOPPING)	496	..Polyphase windings
446	.With nonautomatic control means (e.g., manual)	497	..Series-parallel
447	.Nonresponsive or less responsive for limited periods	498	..Energized or controlled in predetermined sequence
448	.Anti-hunting	499	..Wound or energized in magnetic opposition
449	.With respect to a fixed standard, master or reference device	500	.Plural sources of voltage (including counter e.m.f. cells)
450	..Electrical detector	501	.By shunting armature or primary winding
451	..Mechanically vibrating device as reference device (e.g., tuning fork)	502	.Variable length or tapped armature winding
452	.Plural, diverse conditions or with time-delay means	503	.Frequency or pulsation control
453	..Electrical condition	504	.Voltage control
454	...Plural, diverse electrical conditions	505	.By means to space-discharge devices
455	...Voltage and current (e.g., watts)	506	..Plural, diverse or diversely connected or controlled space-discharge devices
456	.Rate-of-change of a condition	507	..Having discharge-control means (e.g., grids)
457	..Inertia-type detector	508	.Impedance-controlled
458	..Electrical condition	509	..Plural, diverse or diversely controlled impedances
459	.Terminal voltage or counter-electromotive force of controlled motor	510	...Including both reactor and condenser
460	.Sound, supersonic vibration or mechanical vibration	511	..Inherently or self-variable impedance
461	.Speed or rate-of-movement	512	..Inductive reactor controlled
462	..Centrifugal-type detector	513	...Having auxiliary means for saturating reactor core
463	..Tachometer-type detector	514	..Resistor-controlled
464	...Electric generator tachometer	515	...Having short-circuiting means
465	..In excess of a predetermined valve	516	Short-circuited step-by-step
466	.Movement, position, or limit-of-travel	519	.By armature or primary circuit-making and/or breaking
467	..Plural sensing means for determining plural positions or plural limits-of-travel	520	..Electromagnetically actuated
468	..Limit-of-travel control means	521	FIELD OR SECONDARY CIRCUIT CONTROL
469	...Overloading limit-of-travel-type control means	523	.Plural, diverse or diversely connected or controlled field windings
470	..Magnitude of movement or revolutions	524	..Convertible number-of-poles type (e.g., 4-pole or 6-pole)
471	.Responsive to thermal conditions	525	..Differentially wound or energized windings
472	..Of motor control means	526	..Series-parallel
473	..In or about the motor being controlled	527	..Series field winding
474	.Motor load, armature or primary or secondary circuit current	528	..With means to short circuit a field winding
475	..Mechanical-type detector (e.g., by yielding spring devices)	529	..Selectively energized
476	..In excess of a predetermined magnitude	530	.Plural, diverse or diversely connected or controlled sources of field circuit voltage
477	...Intentionally increased load	531	.Variable length or tapped field winding
478	.Electrical conditions in circuit other than controlled motor circuit	532	.By means of space-discharge device in field circuit
479	..Voltage	533	.Impedance-controlled
480	.Radiant energy	534	..Plura, diverse or diversely connected or controlled field circuit impedances
481	.Pressure in a fluid or granular material	535	...Wheatstone bridge
482	.Level of fluid or granular material	536	.By field circuit making and/or breaking
483	.Moisture content or wetness	537	..Intermittently operated
484	.Time or with time-delay means	538	MOTOR STRUCTURE ADJUSTMENT OR CONTROL
485	..Dash-pot or other mechanical delay means	539	.Both armature and field structures rotatable or adjustable
486	..Pilot- or servo-motors	540	.Rotor element movable axially
487	..Electromagnetic or inductive time-delay means	541	.Brush or other current-collector control
488	.Responsive to stress in body or material	542	..Having movement toward or from cooperating part (e.g., brush lifted from commutator)
489	.Responsive to direction, inclination or angular position of bodies		
490	WITH SIGNALS, METERS, RECORDERS OR TESTING DEVICES		

242

BEST COPY AVAILABLE

- 543 THREE-OR-MORE-POSITIONS MOTOR CONTROLLER
SYSTEMS
- 544 .With other motor control device
- 545 ..Main line switch
- 546 .Plural, diverse or diversely controlled
controllers
- 547 ..Plural control stations
- 548 .Plural control stations
- 549 .Return to "off", "starting" or
"neutral" positions
- 550 ..Power-operated controllers
- 551 .Knee- or foot-operated controllers
- 552 .Power-actuated controllers
- 553 ..Separately actuated controller
contacts
- 554 ...Electromagnetic actuated
- 555 ..Electromagnetic actuated
- 556 ...Reciprocating or oscillating
electromagnetic means
- 557 ...Intermittent or step-by-step
operation
- 558 MISCELLANEOUS

DIGEST

- DIG 2 Windshield wiper controls

243

BEST COPY AVAILABLE

JUNE 1985

1	PORTABLY MOUNTED	59	.With excitation winding and/or circuit control
2 R	NONMAGNETIC-TYPE GENERATOR		..Substitute or auxiliary starting source of excitation
2 A	..Electrostatic	60	..Alternating current excitation
3	RECIPROCATING AND/OR OSCILLATING-TYPE GENERATOR	61	..Plural sets of poles type of generator
4	WITH FLYWHEELS OR MASSIVE MOVING PARTS	62	..Plural excitation windings
5	WITH GENERATOR POLARITY CONTROL	63	...Differentially related
6	..By control of excitation	64	...Interpole windings
7	COMBINED CONTROL OF GENERATING MEANS AND LOAD CIRCUIT	65	...Compensating windings
8	..Including load circuit-making and breaking	66	..Series-wound generator
9	PLURAL DRIVING MEANS	67	..Short circuiting of field winding
10	WITH PHYSICAL STARTING AND/OR STOPPING OF THE GENERATOR	68	..Circuit interruption
11	..Automatic in response to predetermined conditions	69	...Continuous make and break
12	..Connecting and/or disconnecting generator and driving means	70	..Variable length field winding
13	..Electric motor as driving means	71	..Control by electric space discharge
14	COMBINED CONTROL OF GENERATOR AND DRIVING MEANS	72	...Discharge control discharge device
15	..Simultaneous control	73	...Electric arc
16	..Electric motor	74	..Control by circuit impedance
17	AUTOMATIC CONTROL OF GENERATOR OR DRIVING MEANS	75	...Plural impedances
18	..With time-delay in the response	76	...Bridge arrangements
19	..Antihunting or rate of change	77	Tuned or resonant
20	..Power factor or phase relationships	78	...Unidirectionally conductive
21	..With line-drop compensation	79	...Resistance
22	..Plural conditions	80	Thermally varied resistance
23	..Including an electrical condition	81	Pressure-varied resistance
24	...Plural electrical conditions	82	Short-circuited
25	Voltage and current	83	Continuous make and break
26	..Light or photosensitive control circuits	84	Step by step
27	..Current output	85	..Plural sources of excitation voltage
28	..Voltage of generator or circuit supplied	86	...Dynamolectric source
29	..Speed or frequency of generator	87	...Battery source
30	..Centrifugal or fly weight governor	88	..With armature or primary circuit control
31	..Tachometer devices	89	..Plural armature circuits or windings
32	..Frequency responsive devices or networks	90	..Short-circuiting of windings
33	..Thermal conditions	91	...By auxiliary brushes diametrically opposed or 180 electrical degrees apart
34	..In generator and/or driving means	92	..Tapped or sectionalized
35	..Fluid pressure including wind	93	..Circuit-making and/or breaking
36	..With respect to a reference or master device or quantity	94	..By armature circuit impedance
37	..Electrical conditions in circuit other than that of generator being controlled	95	...Plural impedances
38	DRIVING MEANS CONTROL	96	...Resistance control
39	..Electric motor control	97	In circuit across brushes or in shunt to generator
40	POWER TRANSMITTING MECHANISM CONTROL	98	WITH SIGNALS, INDICATORS, RECORDERS, TESTING, ETC.
41	..Friction-type transmission	99	100 MISCELLANEOUS
42	..Belt drive		DIGESTS
43	...Slip control		DIG 2 Generator field current-responsive systems
44	GENERATOR CONTROL		DIG 5 Hall effects elements
45	..Combined diverse generator controls		DIG 6 Ripple sensitive
46	..Combined permanent magnet and wound field structure		
47	..Induction generator		
48	..Acyclic or homopolar-type generator		
49	..Magnetic structure		
50	..Magnetic shunt for field flux		
51	..Rotor element		
52	..Stator element		
53	..Odd number of brushes (e.g., 3rd brush type)		
54	..Adjustable current-collecting mechanism		
55	..Movable circumferentially		
56	...Continuously		
57	..With nonexciting saturating means for generator structure		
58	..With means for suppressing, eliminating or minimizing undesired frequencies		

244

JUNE 1985

1	CONVERTIBLE TO DIFFERENT TYPE OF DETECTOR OR TO NONDETECTOR	153	.Heterodyne type
2	.Frequency of phase demodulator	154	..Oscillation fed to mixer from separate source
50	SYNCHRONOUS TYPE	155	WITH ELECTRON BEAM DETECTING ELEMENT
100	COHERER TYPE	156	.With velocity modulation of beam
101	WITH TRANSISTOR ELEMENT	157	WITH GASEOUS DETECTING ELEMENT
102	.With pulse modulation detection	158	.With continuous ionization
103	.With frequency or phase demodulation	159	.Mercury vapor
104	PULSE DEMODULATION OR DETECTION	160	INCLUDING STRUCTURE WITH DISTRIBUTED ELECTRICAL PARAMETERS
105	.Pulse modulated carrier or interrupted continuous wave	161	.Element extends across waveguide
106	.Pulses modulated as to width	162	.Element in series or coaxial with a coaxial line
107	.Pulses modulated as to repetition rate or position	163	WITH BALANCED INPUT AND OUTPUT, OR WITH BALANCED OUTPUT ONLY
108	..With electron beam tube	164	WITH BALANCED INPUT AND UNBALANCED OUTPUT
109	.Pulses modulated as to amplitude	165	.Input applied between two grids (e.g., coplanar grids)
110	FREQUENCY OR PHASE MODULATION	166	FULL WAVE TYPE
111	.With indicator	167	WITH PLURAL SIGNAL OUTPUTS
112	.Plural frequency or phase demodulators	168	WITH SIGNAL FEEDBACK (E.G., NEUTRALIZATION)
113	.With electron beam tube	169	.With separate amplifying stage in feedback loop
114	..With gated beam tube	170	.Regenerative
115	..With secondary emissive electrode	171	..With degeneration
116	.Including structure with distributed electrical parameters	172	..Grid leak type
117	.With piezoelectric crystal	173	.With current feedback impedance (e.g., infinite impedance type)
118	..Phase shift discriminator or quadrature grid type	174	WITH RADIATION REDUCING
119	.With solid material detecting element	175	GRID LEAK TYPE
120	.Quadrature grid type	176	.With additional RC circuit in the cathode path
121	..Grids internally coupled through tube (e.g., electron coupled)	177	.With electron discharge device of four or more electrodes
122	.With oscillator (e.g., synchronized or locked oscillator type)	178	WITH AUTOMATIC CONTROL OF DETECTION
123	..Incoming signal directly pulls oscillator, i.e., directly synchronized	179	.With bias control of detecting element
124	..Oscillator output in phase quadrature with incoming signal	180	WITH ELECTRON DISCHARGE DEVICE OF FOUR OR MORE ELECTRODES
125	...With wattless or quadrature control of oscillator	181	.With virtual cathode
126	.With pulse-forming circuit (e.g., counter type)	182	.Output taken from an electrode other than plate
127	..With saturable reactor	183	.With separate rectifying and control electrodes (e.g., diode-triode)
128	..With trigger circuit	184	.Input applied between plate and cathode
129	.Ratio detector type	185	WITH ELECTRON DISCHARGE DEVICE HAVING A POSITIVELY BIASED CONTROL GRID
130	..With additional amplitude or noise modulation reducing	186	PLATE CIRCUIT TYPE (E.G., ANODE OR BIAS DETECTOR)
131	.With reduction of amplitude variations	187	.Linear (i.e., grid biased to cutoff)
132	..By utilizing detected amplitude modulation	188	WITH ELECTRON DISCHARGE DEVICE HAVING EXTERIOR ELECTRODE
133	..With balancing out of the undesired variations	189	WITH POWER SUPPLY
134	..With amplitude limiter	190	WITH TRIODE
135	.With simultaneous amplitude modulation detection	191	.Two electrodes directly connected
136	.With automatic control of detection	192	WITH AMPLIFIER
137	.Phase shift discriminator type	193	WITH ACOUSTICAL CONVERSION (E.G., LOUD SPEAKER OR TELEPHONE RECEIVER)
138	..With tuned phase shifting transformer (e.g., Foster-Seely discriminator)	194	WITH INPUT TUNING
139	.With input tuning	195	WITH LIQUID ELEMENT
140	.With frequency response determining network (e.g., double-tuned discriminator and slope detector)	196	.Electrolytic type
141	..With plural series resonant networks	197	.Capillary
142	..With plural parallel resonant networks	198	WITH MECHANICALLY MOVABLE ELEMENT (E.G., PIEZOELECTRIC)
143	..With series and parallel resonant networks	199	.Magnetically actuated
144	WITH LIGHT OR HEAT BEAM DEFLECTION OR MODULATION	200	MAGNETIC (E.G., HALL EFFECT)
145	WITH DELAYING PART OF SIGNAL AND RECOMBINING	201	WITH THERMOCOUPLE
146	PLURAL DETECTORS OR DEMODULATORS	202	THERMAL CHANGE
147	.Of diverse type	203	WITH DIODE OR TWO ELECTRODE DETECTING ELEMENTS
148	WITH SECONDARY EMISSION	204	.Plural diodes or elements
149	.Dynatron type	205 R	.Solid material diode or element (e.g., crystal)
150	OSCILLATING TYPE	205 TD	...Detectors having a tunnel diode as detecting element
151	.With magnetic control (e.g., magnetron)	206	.With filter in output
152	.Retarding field type	207	MISCELLANEOUS

245

BEST COPY AVAILABLE

JUNE 1985

5	POLYPHASE	136	.Telescoping magnetic body and coil
10	.ADJUSTABLE INDUCTOR	137	WITH MEANS TO CHANGE COIL LENGTH OR CONNECTIONS
12	.Interconnected windings	138	.Parallel-spaced conductors or coils bridged by movable connector
15	WITH COIL WINDING AND/OR UNWINDING	139	.Contactor following helical conductor
20	WITH DEFORMABLE OR DISTORTABLE COIL AND/OR CORE	140	..Plural movable contactors
30	WITH CONDITION-RESPONSIVE INDUCTANCE ADJUSTING MEANS (E.G., BY ELECTROMAGNET)	141	..With contactor guide track
40	ADJUSTABLE BY MAGNETIC FORCE BETWEEN RELATIVELY MOVABLE PARTS OF THE INDUCTOR	142	.Coil connections changed by moving coil (e.g., coil substitution)
41	.Weight-counterbalanced coil or core	143	.With connection reversing means
45	WITH MOVABLE ELEMENT POSITION INDICATOR	144	.With variable number of short-circuited turns
55	WITH TEMPERATURE MODIFIER	145	.Plural coils (e.g., transformers)
57	.With inductor insulating fluid circulating means	146	..Inductance change in plural coils
58	.Liquid insulating medium	147	..Plural coils or coil portions connected in parallel or in series and parallel
59	.Vented casing	148	..Autotransformers
60	.Ventilating passages (e.g., by coil section or core part spacers)	149	.Contactor slidable on coil winding
61	.Heat exchanging surfaces	150	.Series change (e.g., tap change)
62	.Hollow conductor coil	155	INDUCTIVE REGULATORS WITH NO RELATIVELY MOVING PARTS
65	WITH MOUNTING OR SUPPORTING MEANS (E.G., BASE)	160	.With magnetic shunt to increase leakage reactance
66	.Handle	165	..Air gap in magnetic shunt
67	.Bracket	170	THREE OR MORE WINDINGS
68	.Suspension	171	.Noninductively related windings
69	WITH COIL CAPACITANCE MODIFYING MEANS	172	COIL TURN LINKS PORTION OF CORE ACROSS SECTION (E.G., FRACTIONAL TURN)
70	.With surge potential gradient modifying means	173	INTERLINKED COILS OR WINDINGS (E.G., CURRENT TRANSFORMER)
73	WITH CLOSED COIL OR CONDUCTOR MEMBER	174	.Coil surrounding linear conductor
75	.Movable with respect to another coil	175	CORE SURROUNDING LINEAR CONDUCTOR
77	..With magnetic portion	176	.Hinged core
79	..Angularly movable	177	WITH COIL OR MAGNETIC MATERIAL
82	COIL FORMS PROTECTIVE CASING	178	WITH CLOSED CORE INTERRUPTED BY AN AIR GAP
83	CORE FORMS CASING	179	COILS WITH TEMPERATURE COMPENSATING MEANS
84 R	WITH ELECTRIC AND/OR MAGNETIC SHIELDING MEANS	180	WINDING FORMED OF PLURAL COILS (SERIES OR PARALLEL)
84 C	..Conductive	181	.Wound to reduce external magnetic field (i.e., fieldless winding)
84 M	..Magnetic	182	.Two windings (e.g., transformer)
87	.Adjustable inductor	183	..Coils of different windings interposed
90	WITH OUTER CASING OR HOUSING	184	.Coils having different axis or on different core legs
92	.Internal inductor support	185	.Coil supports or spacers
94	.Fluid insulation	186	COIL FORMED OF PARALLEL CONNECTED CONDUCTORS
96	.Potted type	187	.Crossed or transposed conductors
98	.Exposed core portions	188	TWO WINDINGS WITH MUTUALLY CROSSED WINDING TURNS
100	WITH VIBRATION CONTROL	189	COIL WITH CROSSED TURNS
105	COMBINED	190	.Bank or universal wound coils (e.g., honeycomb, random wound)
107	.With connector	191	.Basket weave (single layer)
110	WITH PERMANENT MAGNET	192	WINDING WITH TERMINALS, TAPS, OR COIL CONDUCTOR END ANCHORING MEANS
115	RELATIVELY MOVABLE COILS	195	COIL SUPPORTED WITHIN GROOVED OR HOLLOW COIL CONDUCTOR OF ANOTHER COIL
116	.With means to change coil length and/or connections	196	WITH SUPPORTING AND/OR SPACING MEANS BETWEEN COIL AND CORE
117	.With core	197	.Coil clamps or wedges
118	..Relatively movable core and coils	198	.Preformed insulation between coil and core (e.g., spool)
119	..Coil and core movable as a unit	199	COIL OR COIL TURN SUPPORTS OR SPACERS
120	...Angularly movable	200	.Printed circuit-type coil
121	.Angularly and linearly movable coils	205	.Coil turns cemented to support or embedded in plastic
122	.Angularly movable	206	.Flexible filament, strip or sheet insulation
123	..About axis parallel to or coaxial with the other coil axis	207	.With coil turn spacer
124	..Nonsymmetrically pivoted coil movable on axis transverse to other coil axis	208	.Coil on a preformed support or mount
125	..About axis normal to other coil axis	209	COIL WRAPPER ON BINDER
126	...Plural coils movable with respect to a coil	210	WITH CORE CLAMPS, WEDGES OR FASTENERS
127	...Similar spherical-shaped coils	211	CONCENTRIC OR NESTED CORE ELEMENTS
128	...Tubular stationary coil		
129	.Movable along or parallel to other coil axis		
130	RELATIVELY MOVABLE CORE AND COIL		
131	.Plural coils with plural cores		
132	.Plural relatively movable core parts		
133	..Adjustable magnetic shunt		
134	..Adjustable air gap		
135	...Angularly movable		

246

BEST COPY AVAILABLE

JUNE 1985

- 212 PLURAL PART CORE
- 213 WOUND CORE
- 214 MULTIPLE MAGNETIC PATHS
- 215 .Three or more
- 216 CORE JOINT STRUCTURE
- 217 .Overlapping laminations (e.g., "Break Joint")
- 218 MAGNETIC ORIENTATION (I.E., DIRECTIONALLY PRESTRESSED CORE MATERIAL)
- 219 CORE INSULATION (E.G., BETWEEN CORE PARTS)
- 220 TWO WINDINGS
- 221 COIL AND CORE
- 222 WINDINGS
- 223 .Having conductor of particular shape (e.g., tapered longitudinally or of noncircular cross section)
- 224 .Nonuniformly spaced turns
- 225 COILS OF SPECIAL CONFIGURATION
- 226 .Figure "8" section
- 227 .Polyhedral section
- 228 ."D" section
- 229 .Toroidal
- 230 .Spherical
- 231 .Conical
- 232 .Planar type
- 233 CORE (E.G., COMPRESSED POWDER)
- 234 .Laminated type (includes bundles of rods or wires)

DIGESTS

- DIG 1 Superconductive
- DIG 2 Separable

247

BEST COPY AVAILABLE

JUNE 1985

1.1	HAVING SIGNIFICANT INFRARED OR ULTRAVIOLET PROPERTY	516	With single or parallel objectives
1.2	..Compound lens system, lens system or component	517	For viewing stereo pairs
1.3	..Infrared lens having four or more components	518	..Spacing of optical elements axially adjustable
1.4	..Infrared lens having three or fewer components	519	...Variable magnification
1.5	..Fluid filter or mirror	520	..Imaging elements movable in and out of optical axis
1.6	..Multilayer filter or reflector	521	..Adjustable along optical axis
1.7	..Having metal layer	522	..With rotatable adjustment
3.6	HOLOGRAPHIC SYSTEM OR ELEMENT	523	..Illuminator
3.61	..Having particular recording medium	524	...Using polarized light
3.62	..Recyclable	525	...With annular lighting structure
3.63	...Sandwich having photoconductor	526	...With optical switching means
3.64	...Crystalline	527	...With condensor and image fields combined
3.65	..Having nonplanar recording medium surface	528	...With support
3.66	..For synthetically generating a hologram	529	..Stage or slide carrier
3.67	..Using modulated or plural reference beams	530	...Adjustable along optical axis
3.68	..Spatial modulation	531	...With plural transverse movements
3.69	..Copying by holographic means	532	...With turntable
3.7	..Using a hologram as an ordinary optical element	533	...With temperature control
3.71	..Scanner	534	..Transparent slide
3.72	..Lens	535	...Reference lines or grids
3.73	...Multiple point hologram	536	...Specimen cavity or chamber
3.74	..Having defined page composer	537	..Telescope
3.75	..For producing, or reconstructing images from, multiple holograms	538	..With viewed screen
3.76	..Holographic stereogram	539	..With image anti-rotation means
3.77	..Superimposed holograms only	540	..Periscope
3.78	..Discrete hologram only	541	...With plural optical axes
3.79	...Sequential frames on moving film	542	...Binocular
3.8	..Having particular laser source	543	...With mechanical adjustment
3.81	..Having multiple beam or diffuse object illumination	544	...Extensible structure
3.82	..In Fourier transform holography	545	..Binocular
3.83	..Having optical element between object and recording medium	546	...Foldable or collapsible
3.84	..Focused image holography	547	...Body supported or with handle
3.85	..For reconstructing image	548	...With focusing means
3.86	..Real image	549	...With adjustable interocular distance
4.1	KALEIDOSCOPE	550	...With adjustable interocular distance
4.2	..Including particles loosely housed for agitation	551	Oculars swing about central axis
6.1	LIGHT BEAM DEFLECTION BY USING A PERIODICALLY MOVING ELEMENT	552	Spacing of optical elements axially adjustable
6.2	..Including transmissive type moving element	553	Oculars rotate about separate axes
6.3	..Having moving lens	554	Spacing of optical elements axially adjustable
6.4	..Having moving prism	555	Spacing of optical elements axially adjustable
6.5	..Including reflective type moving element	556	...Spacing of optical elements axially adjustable
6.6	..Having oscillating element	557	..With plural optical axis
6.7	..Having multifaceted rotating element	558	...Plural magnification in same viewing field
6.8	...With facets parallel to rotation axis	559	..Selective magnification
6.9	..Having planar rotating reflector with transverse rotation axis	560	..Variable magnification
6.91	..Having planar rotating reflector with rotation axis in its plane	561	..With relay
500	IMAGE STABILIZATION	562	...With reticle
501	COMPOUND LENS SYSTEM	563	..Focusing or relatively sliding barrels
502	..With image recorder	564	...Internal focusing
503	..With curved reflective imaging element	565	...With reticle
504	..Two or more in a series	566	..With reticle
505	...Concave, convex combination	567	...With line of sight adjusting means
506	..Right angle cavity inspector	568	...Equatorial mount
507	..Microscope	569	..With prism or U-shaped optical path
508	..With viewed screen	570	..Variable magnification
509	..Interference	571	..With tilted lens or tilted image plane
510	...Using polarized light	572	..With relay
511	...With plural optical axes	573	..Repetitious lens structure
512	...Side-by-side fields	574	EXTENDED SPACING STRUCTURE FOR OPTICAL ELEMENTS
513	...Plural oculars	575	..Wide angle
514	Binocular	576	..With screen or reticle in real image plane
515	Stereoscopic	577	..Extension of tubular element adjustable
		578	WITH BLIND FOR NONVIEWING EYE
		579	BARREL END EYE GUARD OR SHIELD
		580	BARREL END OR LENS MOUNT SHADE
		581	..Collapsible or foldable
		582	MOISTURE OR FOREIGN PARTICLE CONTROL
		583	..Optical element rotates

248

BEST COPY AVAILABLE

584	MOISTURE OR FOREIGN PARTICLE CONTROL	129	.Unitary sheet comprising plural reflecting areas
585	.Fluid directed across optical element	130	STEREOSCOPIC
586	.Microscope drape	131	.Depends on eye parallax
587	.Access facilitating structure	132	.With right and left channel discriminating means (e.g., polarized or colored light)
588	.Cap or cover	133	.Stereo-viewers
589	.Humidity or temperature control	134	..View changers
590	.Sealing	135	...Picture moves linearly past viewing aperture
96.1	..Mirror, prism or signal reflector	136	..Compensates for camera position (e.g., plotting or mapping type)
96.11	LIGHT TRANSMITTING FIBER, WAVEGUIDE, OR ROD	137	..Reflected line of sight
96.12	.Integrated optical circuit	138	...Pictures offset, transposed, or have respective right or left sides adjacent
96.13	.Thin-film optical waveguide	139	..Ocular spacing or angle between ocular axes adjustable
96.14	..Having modulating or switching means	140	..Collapsible
96.15	...Utilizing electro-optics	141	..Illumination
96.16	.Optical coupling means	142	..Ocular to picture distance adjustable
96.17	..Having data bus means	143	..Supporting, mounting, enclosing, or light shielding structure
96.18	..For use between fiber and thin-film device	144	RELIEF ILLUSION
96.19	..Having lens focusing means	145	BINOCULAR DEVICES
96.2	..Utilizing prism and grating	146	.Binocular loupe type
96.21	.Optical connecting means	330	UTILIZING A LIQUID CRYSTAL MATERIAL
96.22	..Having fiber to fiber mating means	331 R	.With electrical excitation means
96.23	..Having fiber bundle mating means	331 T	...With temperature detector
96.24	.Optical transmission cable	332	..Having particular electrical driving circuit
96.25	.Optical fiber bundle	333	...For driving row electrode and column electrode
96.26	..Having imaging bundle	334	..Having significant cell structure
96.27	...For fiber scope	335	...Including plural cells in series
96.28	...For fiber bundle plate	336	...Including particular electrode
96.29	.Optical imaging tunnel	337	...Including particular polarizer
96.3	.Optical fiber with cladding	338	...Including particular reflector
96.31	..Waveguide	339 R	...Including nonconductive layer
96.32	...With graded index core or cladding	339 D	Diffuser
96.33	...Utilizing nonsolid core or cladding	339 F	Filter
96.34	...Utilizing multiple core or cladding	340	...For perpendicular alignment
97	.Optical conductor characterized by material	341	...For parallel alignment
98	SIGNAL REFLECTORS	342	...Including photoconductive layer
99	.Hand or body carried	343	...Including particular seal
100	.Vibrating, oscillating, or rotating	344	...Including particular spacer
101	.For a signal source remote from observer	345	..Having particular illuminator
102	.Light transmitting from source behind a reflector	346	..Exhibiting phase transformation or reversal in sign of dielectric anisotropy
103	.Cube corner, trihedral, or triple reflector type	347 R	..Exhibiting birefringence effects or variable index of refraction
104	..Unitary plate or sheet comprising plural reflecting elements	347 V	...Variable index of refraction
105	.Including a curved refracting surface	347 E	...Electrically controlled birefringence
106	..Minute transparent spheres embedded in matrix	348	..Exhibiting variable diffraction
107	..Plural refracting elements formed as a unitary mass	349	..Exhibiting variable absorption of light due to an additive in the liquid crystal material
108	..With individual reflector element mounting means	350 R	..Having particular liquid crystal composition
109	...Including a threaded member	350 S	Smectic
110	.Discrete reflecting elements formed as a unitary mass	350 F	...Flourescent additive
111	SCALE OR INDICIA READING	351	.With thermal excitation means
112	.Polarizer	352	.Polarization filter
113	.Prism	370	FOR POLARIZATION OF LIGHT OR USING POLARIZED LIGHT
114	.Mirror	371	.Mechanical stress responsive (e.g., elasto-optical)
115	.Lens	372	..For filtering
116	..Movable or adjustable	373	..With particular medium
117	...Along scale or indicia	374	.Electric, magnetic or electromagnetic field responsive means (e.g., electro-optical, magneto-optical)
118	PROJECTION SCREENS	375	..Magnetic field (magneto-optical)
119	.With sound producer	376	...For modulation of beam property
120	.Acoustical		
121	.Moving during projection		
122	.Tracing (e.g., camera lucida)		
123	.With lens (e.g., camera obscura)		
124	.With reflector or additional screen		
125	.Border, mask, shade, or curtain		
126	.Curved		
127	.Embedded particles		
128	.Unitary sheet comprising plural refracting areas		
	..Lenticular		

JUNE 1985

FOR POLARIZATION OF LIGHT OR USING	166	..Selective	
POLARIZED LIGHT	167	SURFACE COMPOSED OF LENTICULAR ELEMENTS	
..Electric, magnetic or electromagnetic	168	LIGHT DISPERSION	
..field responsive means (e.g.,	169	SINGLE CHANNEL TO OR FROM PLURAL	
..electro-optical, magneto-optical)		CHANNELS (E.G., LIGHT DIVIDING,	
..Magnetic field (magneto-optical)		COMBINING, OR PLURAL IMAGE FORMING)	
..For modulation of beam property	170	..Portion of rays refracted by prism	
377 Using layered structure or plural	171	..Rays reflected	
378 mediums	172	..Different rays reflected and	
....With particular direction of the		transmitted	
field in relation to the medium,	173	..Partial reflection at prism face or	
beam direction or polarization		interface between prisms	
379 ..For beam focusing	174	..Ray combining	
380 ..For beam deflection or scanning	409	LENSES	
381 ...Using reflecting or cavity structure	410	..Eyepiece	
382 ...Using more than one polarization	411	..Double refracting	
(e.g., digital)	412	..With field curvature shaping	
383 ...Using single polarization	413	..With graded refractive index	
384 ..For modulation of beam property	414	..Microscope objective	
385 ...Using reflective or cavity structure	415	..Telecentric system	
386 Semiconductor	416	..Spherical	
387 ...Compensation technique	417	..Method of making or assembly	
388 ...Using plural mediums	418	..Fluid	
389 ...With particular direction of the	419	..With variable magnification	
field in relation to the medium,	420	..Anamorphic	
beam direction or polarization	421	..With prism anamorphoser	
390 ...With particular medium or state of	422	..Selective magnification by exchanging	
the medium		or adding lens components	
391 Liquid medium	423	..With variable magnification (e.g., zoom	
392 ...With particular electrode structure		type)	
or arrangement, or medium mounting	424	..Prism lens type	
structure or arrangement	425	..With fixed conjugates	
393 ...With particular field	426	..Reverse telephoto	
394 ..By reflection or refraction	427	..With mechanical compensation	
395 ...With particular medium	428	..With macro-type focussing	
396 ..Polarization varies over surface in	429	..Adjusting mechanism	
direction of magnitude (e.g.,	430	..With macro-type focussing	
vetograph)	431	..Diffusing	
397 ..Using dichroic medium	432	..Including a nonspherical surface	
398 ..Of particular composition or structure	433	..Cylindrical	
399 ..Glare prevention by discriminating	434	..Toroidal	
against polarized light	435	..Paraboloidal	
400 ..With birefringent element	436	..Asymmetric (e.g., prismatic or	
401 ..For beam deflection or splitting		eccentric)	
402 ..Prisms	437	..Plural focal length	
403 ..For modulation of beam property using	438	..Selective wavelength transmitting or	
plural elements		blocking	
404 ...Frequency filter or interference	439	..With separate filter	
affects	440	..Annular zonal correcting	
405 ...Using compensation techniques	441	..Panoramic	
406 ..With particular material or mounting	442	..Including concave or convex reflecting	
structure		surface	
407 ..Superimposed or in series polarizers	443	..With aspheric surface (e.g., Schmidt	
relatively adjustable		lens)	
408 ..With color filter	444	..Surface coated on lens	
162.11 FOR DIFFRACTION	445	..With reflecting element	
162.12 ..Using Fourier transform spatial	446	..For producing a double pass	
filtering	447	..With diverse refracting element	
162.13 ..For correlation only	448	..With light limiting or controlling	
162.14 ..For convolution (crosscorrelation)		means	
only	449	..Diaphragm	
162.15 ..With diffraction grating before or at	450	...Between lens components	
Fourier plane	451	..With multipart element	
162.16 ..From zone plate	452	..Echelon (e.g., Fresnel lens)	
162.17 ..From grating	453	..Afocal (e.g., Galilean telescopes)	
162.18 ..For ornamental effect or display	454	..Telephoto	
162.19 ..For diffractive subtractive filtering	455	..With five components	
162.2 ..Including particular grating	456	..With four components	
characteristic	457	..With less than four components	
162.21 ...Nonplanar grating	458	..Reverse telephoto	
162.22 ...Echelette or blazed grating	459	..With eight components	
162.23 ...Reflection grating	460	..With seven components	
162.24 ...Variable grating	461	..With six components	
163 LIGHT INTERFERENCE	462	..With five or less components	
164 ..Interference produced by coating or	463	..Multiple component lenses	
lamina	464	..Six components	
165 ..With transmissive coating on free lens	465	..Five components	
surface	466	...+ - - + + arrangement	

250

BEST COPY AVAILABLE

JUNE 1985

LENSES		275	..Element rotates about axis perpendicular to light path
467	..Multiple component lenses	276 R	GLARE OR UNWANTED REFLECTION REDUCTION
468	..Five components	276 SL	..Stray light absorbers
469	...+ + - - + arrangement	277	..With mirror (e.g., mirror with glare screen)
470	...+ + - + arrangement	278	..Anti-glare mirrors
471	...+ - - + arrangement	279	...Adjustable
472	...+ + - + arrangement	280	Plural reflecting surfaces
473	...+ + + - arrangement	281	Prismoidal
474	..Three components	282	Reversible
475	...+ - + arrangement	283	Translucent or other semitransmitting panel selectively positioned in front of mirror
476	...+ + - arrangement	284	..Display window
477	...+ + + arrangement	484	LIGHT BEAM DEFLECTION USING A MOVING ELEMENT OR MEDIUM
478	..Two components	485	..By frustrated total internal reflection
480	...+ + arrangement	486	..By moving a reflective element
481	...+ - arrangement	487	..Reflective element moved by deformable support
482	..Single component with multiple elements	353	LIGHT CONTROL BY CHANGING BULK OPTICAL PARAMETER OF AN OPTICAL ELEMENT
483	..Three or more elements	354	..Optical parameter changed by actinic radiation
235	..With viewed object or viewed field illumination	355	..Optical parameter changed by an applied electrical or magnetic field
236	..Illuminating beam coaxial with lens axis	356	..Electro-optic light valve
237	..Illumination through lens	357	..Electrochromic light valve
238	..With viewed object support	358	..Optical parameter changed by an acoustic wave
239	..With viewed object support	359	LIGHT CONTROL BY CHANGING OPTICAL OR PHYSICAL CHARACTERISTIC OF A LIGHT CONTROL SURFACE OR INTERFACE
240	..On lens supporting handle	360	..Shape or contour of light control surface altered
241	..Relatively movable informatory sheet and lens (e.g., reading machines)	361	..Light control surface forms image on projected light beam
242	..With lens casing	362	..Changing position or orientation of suspended particles
243	..Combined with diverse art tool, instrument or machine	363	..Light control surface formed or destroyed
244	..Operation viewed through lens	286	PRISMS
245	..With support	287	..Mounts
246	..With additional handle	600	MIRRORS
247	..Lens movable in its plane	601	..With a transmitting property
248	..Body or apparel attached or carried	602	..With reflections in series
249	...Monocular loupe type	603	..Back to back
250	..Foldable or collapsible	604	..Retractable vehicle mirror
251	..With clamp or grip	605	..Automatically adjustable with vehicle position
252	..Lens mounts	606	..On relatively movable vehicle portion or accessory
253	...With temperature compensation or control	607	..Including means for controlling the shape of a mirror surface
254	...Plural lenses in common carrier selectively operable (e.g., turret type)	608	..Membrane mirror in mechanical contact only at its edge
255	...With axial adjustment (e.g., adjustable focus)	609	..With means for minimizing internal mirror stresses
256	...With handle	610	...Fluid cooled mirror
257	...Detachably attached to plate or barrel	611	..Including a plurality of adjustable mirror supports
258	BUILDING INTERIOR ILLUMINATION WITH OUTSIDE LIGHT	612	..Plural mirrors
259	..Unitary light transmitting member comprising plural reflecting or refracting elements	613	..Composite or echelon mirrors or light concentrating array
260	..Plural members in series	614	...With a line focus
261	..Elements on two sides of member	615	..Identical side mirrors adjustable with a respect to a central mirror
262	..With internal reflections	616	..Identical adjacent mirrors identically supported
263	..Slats or strips	617	...With reflections in series
264	..With reflection	618	..With reflections in series
265	..Internal	619	...Including curved mirror surfaces in series
266	LIGHT CONTROL BY OPAQUE ELEMENT OR MEDIUM MOVABLE IN OR THROUGH LIGHT PATH	620	With concave and convex mirrors in series
267	..Fluid	621	...To view observer
268	..With glare or flicker elimination		
269	..Electro-mechanical		
270	..String or ribbon type		
271	..Slit type		
272	..With relative motion of two aperture elements		
273	..With rotating element (e.g., scanning discs)		
274	..Continuously rotating apertured element		

JUNE 1985

MIRRORS

- 622 .Plural mirrors
- 623 ..With reflections in series
- 624 ...With three or more reflections in series
- 625 ...Including an adjustable mirror
- 626 Including a curved mirror
- 627 ..Including adjacent plane and curved mirrors
- 628 ..Relatively adjustable
- 629 ..Wide angle segmented mirrors
- 630 .Concave cylindrical or providing a line focus
- 631 .With mirror surface of varied radius
- 632 ..Concave
- 633 .With support
- 634 ..Mirror movable relative to support
- 635 ...With rotary to linear motion converting mirror adjusting means
- 636 With means for rotation about perpendicular axes
- 637 ...With a rigid handle extending to or near a mirror pivot
- 638 ...With means for rotation about perpendicular axes
- 639 ...With switch or motor controlling mirror movement
- 640 ...Body or apparel mirror support
- 641 ...With mirror supporting column or sliding adjustment
- 642 ..With handle
- 643 ..Laminated or layered mirror support
- 644 .With selective absorption or transparent overcoating
- 322 SCREENS
- 311 FILTERS
- 312 .Fluid
- 313 .Sequentially additive
- 314 .Neutral or different densities
- 315 .Movable in or out of optical path
- 316 .Superimposed or series
- 317 .Filters in optical parallel (e.g., side-by-side)
- 318 .With support or frame
- 319 OPTICAL APERTURES OR TUBES, OR TRANSPARENT CLOSURES
- 320 METHODS
- 321 MISCELLANEOUS

DIGEST

DIG 3 Magnetic

252

JUNE 1985

1	SIGNIFICANT BULK EFFECT	37	..Three potential barriers
2	.Amorphous material	38	...Controlled rectifiers and Shockley diodes
3	.Multivalley material (e.g., Gunn effect)	39	Bidirectional (e.g., Triacs, Diacs)
4	SIGNIFICANT THIN FILM	40	..Integrated chip
5	.Josephson junction	41	..Contains a field effect transistor
6	.Active insulator	42	...Complementary
7	SIGNIFICANT SEMICONDUCTOR POTENTIAL BARRIER	43	...And bipolar transistor
8	.Organic semiconductor	44	..Complementary
9	.Point contact barrier	45	..Matrix and array
10	.Semiconducting metal oxide material (e.g., zinc oxide)	46	..Plural devices share common active region (e.g., Darlington type)
11	.Selenium or tellurium semiconductor	47	..Isolation means
12	.P/N tunnel junction (Esaki type)	48	...P/N junction
13	.P/N breakdown junction (e.g., Zener, avalanche, punch through)	49	...Dielectric
14	.P/N capacitive junction (e.g., varactor)	50	...Combined P/N junction and dielectric isolation
15	.Metal semiconductor junction (e.g., Schottky barrier)	51	..Combined with a passive device (e.g., resistor, capacitor, inductor)
16	.Heterojunction	52	..Surface effects (e.g., passivation, guard rings)
17	.Light emitting junction (infrared to u.v.)	53	..Field relief
19	..Combined with light responsive device	54	..Multiple dielectrics
20	.P/N junction of particular geometry	55	..Discrete device with particular external geometry (e.g., grooves, holes)
21	.Unijunction transistor (double base diode)	56	..Mesa
22	.Junction field effect (unipolar transistor)	57	..Negative resistance
23.1	.Insulated gate device	58	..Intrinsic region (e.g., I, II N)
23.2	..Significant semiconductor chemical compound in bulk crystal (e.g., GaAs)	59	..Polycrystalline
23.3	..Short channel device	60	..Crystallography
23.4	...Vertical channel or double diffused transistor	61	..Particular compound
23.5	..Variable threshold (e.g., MNOS, floating gate memory)	62	..Copper sulfide
23.6	..Insulated gate capacitor or insulated gate transistor combined with capacitor (e.g., dynamic memory cell)	63	..Particular dopant
23.7	..Thin-film semiconductor (e.g., silicon on sapphire)	64	..Deep level
23.8	..With means to increase breakdown voltage	65	OHMIC CONTACTS OF PARTICULAR MATERIAL OR GEOMETRY
23.9	..With self-aligned semiconductor PN junction (e.g., silicon gate)	66	..Liquid bonding
23.11	..With field oxide or channel stopper structure	67	..Composite material
23.12	..With permanent threshold adjustment (e.g., enhancement and depletion mode)	68	..Geometrical shape
23.13	..With gate insulator breakdown protection means (e.g., gate protection diode)	69	..Beam lead
23.14	..With multiple control electrodes, at least one of which is an insulated gate, or with distributed control electrode	70	..Lead frame
23.15	..With uncommon gate insulator material	71	..Multiple layers
24	..Charge transfer device	72	ENCAPSULATED
25	..Responsive to nonelectrical external signals	73	..In glass
26	..Pressure	74	COMBINED WITH HOUSING
27	..Magnetic field	75	..With plural discrete devices
28	..Heat	76	..Diode stack or bridge
29	..Radiation	77	...Dry rectifier type
30	...Light (infrared to u.v.)	78	..With desiccant, getter, or gas
31	Vidicons	79	..With single discrete device held in place by pressure means
32	...Matrix	80	..With device mounted on insulating support
33	..Two potential barriers	81	..With cooling (e.g., heat sinks)
34	..Bipolar transistor	82	..Fluid cooling
35	...Lateral transistor	83	...Cryogenic
36	...Multielement (e.g., multiemitter, tetrode)	84	..With shield
		85	MISCELLANEOUS
			CROSS-REFERENCE ART COLLECTIONS
		86	SHORTED JUNCTIONS
		87	PELTIER EFFECT
		88	PARTICULAR INTERNAL STRUCTURE OF REGION
		89	STEP JUNCTION
		90	CONCENTRATION GRADIENT
		91	ION IMPLANT
		92	INTEGRATED INJECTION LOGIC

JUNE 1985

1	POWDER METALLURGY PROCESSES WITH HEATING	66	.Consolidation of powders
	OR SINTERING	67	..Extrusion
2	.Making porous product	68	..Isostatic/Hydrostatic pressing
3	.Making articles of indefinite length	69	..Rolling
4	..Filaments or fibers		
5	.Making composite or hollow article		
6	..Powder next to powder		
7	...One or more components not compacted		
8	..Powder next to solid		
9	...Powder not compacted		
10	.Metal and nonmetal in final product		
11	..Nonmetal is elemental carbon		
12	..Boride containing		
13	..Nitride containing		
14	..Carbide containing		
15	...Complex or multiple carbides		
16	With another binary nonmetal		
17	...Single carbide		
18	Tungsten carbide		
19	..Oxide containing		
20	...Rare earth oxide		
21	...Silver metal with metal oxide		
22	...Copper oxide		
23	.Powder shape or size characteristics		
24	..Filaments or fibers		
25	.Controlled cooling after sintering		
26	.Post sintering operation		
27	..Impregnation		
28	..Subsequent working		
29	..Subsequent heat treatment (e.g., annealing, etc.)		
30	.Powder pretreatment (prior to consolidation or sintering)		
31	..Heat treatment of powder		
32	..Mechanical blending		
33	..Comminuting		
34	..Chemical blending		
35	..Coating		
36	..Addition of fugitive material		
37	...Additional material is solid		
38	.Consolidation of powder prior to sintering		
39	..Specific pressure or lack of pressure recited		
40	...Slip or slurry		
41	..Extruding		
42	..Isostatic or Hydrostatic		
43	..Rolling		
44	.Pretreatment of consolidated powders		
45	.Sintering which includes a chemical reaction		
46	.Alloying occurs during sintering		
47	.Liquid phase sintering		
48	.Heat and pressure simultaneously to effect sintering		
49	..Hot isostatic pressing (HIP)		
50	..Hot rolling		
51	..Multiaxial (Not HIP)		
52	..Heating by electrical means other than radiant energy		
53	.Plural heating steps including sintering		
54	..Different temperatures		
55	..Additional operation between heating steps		
56	.Special medium during sintering		
57	..Special atmosphere		
58	...Hydrogen or hydrogen plus nitrogen (Nitrogen per se in 57)		
59	...Hydrocarbon or derivative (e.g., CH ₄ , etc.)		
60	...Vacuum		
61	FORMING ARTICLES BY UNITING RANDOMLY ASSOCIATED METAL PARTICLES		
62	.Powder pretreatment		
63	..Includes a chemical reaction		
64	..Includes coating of particles		
65	..Includes adding a binder material		

254

BEST COPY AVAILABLE

JUNE 1985

1	PROCESS-DISINFECTING, PRESERVING,	49	INCLUDING MEANS FACILITATING PART
2	DEODORIZING, OR STERILIZING		REPLACEMENT OR REPAIR OTHER THAN
3	.Step of warning or decreasing hazard of		SOLID, EXTENDED SURFACE, FLUID CONTACT
4	process		MEANS
5	.Process control in response to analysis	50	ANALYZER, STRUCTURED INDICATOR, OR
6	.A gas is substance acted upon		MANIPULATIVE LABORATORY DEVICE
7	.Deodorizing	51	.Calorimeter
8	.Affecting structure, article, etc.,	52	.Chemiluminescent
9	submerged in marine environment	53	.Corrosion tester
10	.Maintaining environment nondestructive	54	.Flame ionization detector
11	to metal	55	.Structured visual or optical indicator
12	..Using protective article (e.g.,		per se
13	antitarnish fabric, etc.)	56	..Having reagent in absorbent or
14	..Using gaseous preservative,		bibulous substrate
15	preservative added to gaseous phase	57	..Having coated reagent
16	of environment, or maintaining	58	..In holder or container having special
17	gaseous phase nondestructive		form
18	...Manipulating gaseous environment for	59	...Column
19	preservative purpose	60	Having plural-layered material
20	...Steam environment	61	.Test package or kit
21	...Aqueous acid environment	62	.Automatic analytical monitor and
22	...Aqueous alkali environment		control of industrial process
23	...Essentially pure water environment	63	.Sample mechanical transport means in or
24	...Using organic compound having		for automated analytical system
25	phosphorus	64	..Means is turntable (circular)
26	...Using organic nitrogen compound other	65	..Means is conveyor and rack
27	than ammonium salt	66	..Means is moving tape or band
28	...Using organic carboxylic acid or salt	67	..With specific analytical program
29	thereof		control means
30	...Using inorganic silicon or phosphorus	68	.Means for analyzing liquid or solid
31	compound		sample
32	...Using heavy metal or compound thereof	69	..Sorption testing
33	.Using sonic or ultrasonic energy	70	...Liquid chromatography
34	.Using microwave energy	71	...With radioactive material
35	.Using direct contact with electrical or	72	..Including centrifuge
36	electromagnetic radiation	73	..With coagulometer for agglutination,
37	..In atmosphere other than air		clotting, or prothrombin, or for
38	..Ultraviolet		particle (e.g., cell etc.) counting,
39	..Including additional step of preventing		or volume or characteristics
40	damage to sealed container		determination
41	.Using direct contact steam to disinfect	74	..Dairy tester
42	or sterilize	75	..Including titrator
43	..And additional disinfecting or	76	...Conductimetric type
44	sterilizing agent	77	...With integrating or differentiating
45	.Using disinfecting or sterilizing agent		means
46	..In situ generation of agent other than	78	..Including means for pyrolysis,
47	aldehyde or glycol		combustion, or oxidation
48	..And removing the agent by chemical	79	...Biological, chemical, or total oxygen
49	reaction or sorption		demand (i.e., BOD, COD, TOD)
50	..And recovering or reusing the agent	80	...And means directly analyzing evolved
51	..Treating bulk material		gas
52	..With positive pressure or vacuum	81	..Automated system with sample fluid
53	..Using alkylene oxide		pressure transport means
54	..Using cyanide	82	...And means segmenting fluid material
55	..Using aldehyde	83	.Means for analyzing gas sample
56	..Using halogen or halogen-containing	84	..Breath tester
57	compound	85	...Based on color change
58	.Using fluent heat transfer medium other	86	..Including means reacting gas with
59	than air		color indicator
60	.By sudden release of pressure	87	...Strip indicator
61	.Process of storage or protection	88	..Including means for adsorbing or
62	..Of liquid		absorbing gas into or onto liquid or
63	...By preventing evaporation		solid media
64	Of water	89	...Gas chromatography
65		90	...With conductimetric detector
66		91	...With photometric detector
67		92	...With volumetric detector
68		93	..Including means dividing sample stream
69			into plural parallel segments having
70			diverse treating means and the
71			analytical result compared or
72			combined
73			..Combustible gas detector
74		94	...With thermoelectric detector
75		95	Wheatstone bridge
76		96	With specific coating on bridge
77		97	element
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			
101			
102			
103			
104			
105			
106			
107			
108			
109			
110			
111			
112			
113			
114			
115			
116			
117			
118			
119			
120			
121			
122			
123			
124			
125			
126			
127			
128			
129			
130			
131			
132			
133			
134			
135			
136			
137			
138			
139			
140			
141			
142			
143			
144			
145			
146			
147			
148			
149			
150			
151			
152			
153			
154			
155			
156			
157			
158			
159			
160			
161			
162			
163			
164			
165			
166			
167			
168			
169			
170			
171			
172			
173			
174			
175			
176			
177			
178			
179			
180			
181			
182			
183			
184			
185			
186			
187			
188			
189			
190			
191			
192			
193			
194			
195			
196			
197			
198			
199			
200			

Note: See subclass 900 for art collection pertaining to subclasses 1-43

44 BLOOD TREATING DEVICE FOR TRANSFUSIBLE
BLOOD
45 .Oxygenator
46 ..Including integral heat-exchange means
47 ..Bubble or foam producing
48 ..Membrane

255

BEST COPY AVAILABLE

ANALYZER, STRUCTURED INDICATOR, OR MANIPULATIVE LABORATORY DEVICE	140	..With liquid present
..Means for analyzing gas sample	141	..Plural reaction beds
98 ..Analysis based on electrical measurement	142	...Sequentially arranged
99 ..Miscellaneous laboratory apparatus and elements per se	143	..Including specific wind box or particulate matter support grid
100 ..Pipette or other volumetric fluid transfer means	144	..Including means to strip reaction mass from, or to regenerate, the particulate matter (including fluidized bed regenerators per se)
101 ..Including means for separating a constituent, e.g., filter, condenser, extractor, etc.	145	..And means providing flow of particulate matter into or out of reaction chamber
102 ..Container	146	..With heat exchange means affecting reaction chamber or reactants located therein
103 ..Valve or connector structure	147	..And means mechanically separating and removing particulate bed material from fluid effluent
104 ..Holder, support, housing, or hood	148	..Ammonia synthesizer
105 CONTROL ELEMENT RESPONSIVE TO A SENSED OPERATING CONDITION	149	..With means simultaneously carrying out conjugated reactions within single reactor
106 ..Responsive to liquid level	150	..Pigment or carbon black producer
107 ..Control element directly mechanically linked to separate sensor	151	..With means injecting quench stream into reaction chamber downstream of reaction site
108 ..Control element responds as a function of a variable signal from a sensor	152	..With particulate product collecting surface and means mechanically removing product therefrom
109 ..Controls heat transfer	153	...Moving collecting surface
110 ..Controls flow rate of a material to or from a contact zone	154	Rotary collecting surface
111 ...Material is an input to contact zone	155	Disk or plate
112 ..Control element is fluid pressure sensitive	156	..With plural sequential reaction zones or chambers
113 ..Pressure-relief valve (e.g., pop-off valve) or check valve	157	...With movably or removably mounted plug means for converting reactor from (N) to (N+1) reaction stages
114 ..Control element is a binary responsive valve	158	..Vapor phase reaction type
115 ..Valve diverts flow from a contact zone	159	..For radioactive reactant or product
116 ..Sensed condition is operating time and control is operation sequencer	160	..Inorganic sulfur acid or anhydride producing type
117 WITH SAFETY FEATURE	161	..Acid is final product
118 ..Preventing opening of closure of pressurized apparatus at unsafe pressure	162	..Inorganic hydrator
119 WITH INDICATING, SIGNALLING, RECORDING, SAMPLING, OR INSPECTION MEANS	163	..Explosives synthesizer
120 FOR DEODORIZING OF, OR CHEMICAL PURIFICATION OF, OR GENERATION OF, LIFE-SUSTAINING ENVIRONMENTAL GAS	164	..Solid reactant type (i.e., absence of fluid reactants)
121 ..With means exposing gas to electromagnetic wave energy or corpuscular radiation	165	..Including ignition means for reactant
122 ..Including solid, extended surface, fluid contact reaction means (e.g., Raschig rings, particulate or monolithic catalyst, etc.)	166	...Electrically actuated
123 ..Including means adding material into environmental gas	167	..Including reactor cooling means surrounding reactor
124 ..And mechanical means creating forced draft at addition site	168	..Waste gas purifier
125 ..With material-heating means	169	..Including means providing sequential purification stages
126 ...Material is combusted	170	...Plural chemical reaction stages
127 SHOCK OR SOUND WAVE	171	Solid, extended surface, fluid contact type
128 ..Including super or ultra sonic energy generation means	172	And means downstream of a stage for injecting a reactant into waste gas for interreaction in subsequent stage
129 CHEMICAL REACTOR	173	..With heat exchanger for reaction chamber or reactants located therein
129.1 ..Soap making	174	...Electrical type
130 ..Bench scale	175	..Regenerative heat sink
131 ..Organic polymerization	176	..Including waste gas flow distributor upstream of reaction site and within reaction chamber modifying velocity profile of gas
132 ..Closed loop		..Including solid, extended surface, fluid contact reaction means, e.g., inert Raschig rings, particulate absorbent, particulate or monolithic catalyst, etc.
133 ..Generating foamed plastic		...And contact regenerating means or means for cleaning an internal surface of the reaction chamber
134 ..Including plural sequential reaction stages		
135 ..Including reactant agitating means in reaction chamber	177	
136 ...And means rotatably mounting reaction chamber		
137 ...Horizontal reaction chamber with screw or worm agitator	178	
138 ..With heat exchanger for reaction chamber or reactants located therein		
139 ..Fluidized bed		

CHEMICAL REACTOR		190	...Plural solid, extended surface, fluid contact reaction stages each containing, e.g., inert Raschig rings, particulate sorbent, particulate or monolithic catalyst, etc.
..Waste gas purifier			
...Including solid, extended surface, fluid contact reaction means, e.g., inert Raschig rings, particulate absorbent, particulate or monolithic catalyst, etc.		191	Superimposed reaction stages in single reaction chamber
179	...Fixed bed with resilient or differential thermal expansion compensating bed support means	192	At least one reaction stage formed of fixed, annularly shaped bed of contact material and means directing reaction stream therethrough substantially perpendicular to longitudinal axis of bed
180	...Unitary (i.e., nonparticulate) contact bed (e.g., monolithic catalyst bed, etc.)		
181	...Fixed annularly shaped bed of contact material and means directing gas therethrough substantially perpendicular to longitudinal axis of bed	193	...Reaction stages located within single reaction chamber
182	..Including means injecting combustion fuel into reaction chamber in direct contact with waste gas	194	And means downstream of a stage for internally injecting a reactant into a reaction stream for interreaction in a subsequent stage, or injecting an internal quench stream into reaction stream passing between stages
183	...And means mixing combustion fuel with waste gas upstream of reaction site		
184	.For chemically destroying or disintegrating solid waste, other than burning alone	195	Means within reaction chamber redistributing reaction stream as it passes between adjacent stages
185	.For chemical recovery of chemicals from waste paper making liquor	196	..Including plural parallel reaction stages with each stage in form of a reaction tube
186	.With means applying electromagnetic wave energy or corpuscular radiation to reactants for initiating or perfecting chemical reaction	197	...Tubular stages in single reaction chamber
186.01	..Magnetic	198	..Including heat exchanger for reaction chamber or reactants located therein
186.02	...Object protection		
186.03	...With electrical discharge	199	..Electrical type
186.04	..Electrostatic field or electrical discharge	200	..Indirect heat-exchange tube within reaction chamber with a nonreactant heat-exchange fluid passing therethrough
186.05	...Treating surface or solid substrate		
186.06	...Surface in metal	201	...Tube and shell type
186.07	...Ozonizers	202	..Heat-exchange jacket surrounding reaction chamber
186.08	With preparatory or product-treating means	203	...Including fluid-transfer means connecting chamber to heat-exchange jacket
186.09	With drying means	204	...Means associated with jacket providing combustion gas as heat-exchange medium
186.1	With filtering or particle removal means	205	...Including baffle or stirring means disposed within jacket or chamber, the baffle means within chamber connected directly to wall thereof
186.11	With cooling, compression, condensation, or liquefying means		
186.12	...With subsequent use means	206	..Regenerative heat sink
186.13	...With electrode moving means	207	..Means injecting internal quench stream into reaction stream downstream of reaction stage
186.14	...With fluent reactant flow control means	208	..Apparatus operates at positive pressure
186.15	...With current control or special electrical supply means	209	..Including means rotating reaction chamber during use
186.16	With pulse generating means	210	..And means wiping or scraping interior surface of reaction chamber
186.18	...Cylindrical electrode	211	..Including solid, extended surface, fluid contact reaction means, e.g., inert Raschig rings, particulate absorbent, particulate or monolithic catalyst, etc.
186.19	With heating or cooling means		
186.2	...With heating or cooling means	212	..With means removing and recovering product from extended surface contact material
186.21	...Arc or spark discharge means	213	..Particulate contact material type and means providing flow of particulate material into or out of reaction chamber with reactants or products
186.22	With electrode or reaction space heating or cooling means	214	...Transfer line type reaction chamber
186.23	...With preparatory or product-treating means	215	...And internal mixing means
186.24	With nitrogen fixation means		
186.25	With cooling or pressurizing means		
186.26	...With electrode moving means		
186.27	With current control means		
186.28	With current control means		
186.29	...With RF input means		
186.3	..With ultraviolet radiation generating means		
187	..Combined		
188	..Including plural reaction stages		
189	..And means providing discrete sequential reaction stages, e.g., train, etc.		

	CHEMICAL REACTOR	240	.Including specific material of construction
	.Including solid, extended surface, fluid contact reaction means, e.g., inert Raschig rings, particulate absorbent, particulate or monolithic catalyst, etc.	241	..Reactor liner
		242	.Positive pressure type
		243	PHYSICAL TYPE APPARATUS
		244	.Including serially disposed vaporizing heating means and solid material deposition means maintained at a temperature lower than said heating means
216	..Compact bed of particulate, fluid contact material and means providing gravity flow of material within bed		..Crystallizer
217	..And means upstream of extended surface, fluid contact means removing particulate impurities from reactant stream	245	..Including shaping surface
		246	..Particulate feed source spaced from the substrate
218	..Fixed annularly shaped bed of contact material and means directing reactant therethrough substantially perpendicular to longitudinal axis of bed	247	..Including crucible
		248	...Seed puller
		249	..Crucible-free zone refining
219	..And means loading contact material into, or unloading contact material from, reactor or means providing internal contact material reservoir	250	..Including means separating and conveying crystals to a melting zone
		251	..Hydraulic classifier with crystallizer
220	..And reactant flow distributor upstream of contact means and within reaction chamber modifying velocity profile of reactant flow	252	..Including feed compartment for introducing nutrient
		253	..Movable crystallizer or scraping means
221	..Fixed contact bed type with resilient or differential thermal expansion compensating bed support means	254	..Means separating or dissolving a material constituent
		255	..Liquid-liquid contact means
222	..Unitary (i.e., nonparticulate) contact bed, (e.g., monolithic catalyst bed, etc.)	256	...Including pulsator, adjustable plates, or plural inlets, e.g., spraying, etc.
		257	...Including rotating chamber or rotating member within chamber, e.g., mixer-settler, etc.
223	..With contact material regenerating means per se or combined with reactor	258	...Having rotating member within chamber
		259	...Including heating and cooling means
224	.Including internal mixing or stirring means	260	..Liquid-solid contact means
		261	...Sulfur extraction
225	..Mechanical type stirring means	262	...Including monolithic nonporous body of solute
226	...In positive pressure reactor	263	...Including means restricting solvent contact to one end of body of solute
227	...Including a draft tube for internal recirculation	264	...Buoyant holder
		265	...Manual or mountable holder, e.g., soap holder, etc.
228	...Including flow directing baffle attached directly to reaction chamber wall	266	...Including means to remove solids from a filter
229	...Longitudinally extending spiral stirring means	267	...Conveyor support for solid material during contact, e.g., bucket, etc.
230	..Thermosyphon or differential density mixing means, e.g., means internally recycling reaction mass via differential density pumping, etc.	268	...Including rotating member
		269	...Member is container
231	...Gas sparger type mixing means submerged in liquid reactant	270	Including internal rotating member
		271	Partitions divide container
232	.Including solid reactant and means charging solids into, or discharging solids from, reaction chamber	272	Member conveys material into and out of container, e.g., screw propeller, etc.
		273	...Including perforated member which is nonlinear or inclined with respect to the major axis of container
233	..Having both charge and discharge means along with means conveying solids therebetween located within reaction chamber	274	...Including parallel perforated members perpendicular to, or parallel to, major axis of container
		275	...Side wall of holder perforated
234	.Including external recycle loop	276	Perforations of holder form inlet for solvent
235	..And means heating or cooling loop or reaction mass located therein	277	...Including plural orifice inlet, or deflector adjacent inlet for solvent flow
236	.Including means separating reaction chamber into plural reactant-containing compartments and means moving reactant therebetween	278	...Having inlet submerged within body of a solid solute
237	..Movably mounted container type separating means and means moving same	279	...Solvent vapor condenser
		280	...Means recirculating solvent
238	..Solid reactant containing perforated or porous container type separating means	281	...Including bypass
		282	...Including dip tube for inlet or outlet of fluid solvent
239	.Reaction chamber includes at least one perforated, porous, or semipermeable wall and is adapted for holding solid reactant	283	...Internal heater, e.g., steam coil, etc.
		284	

258

PHYSICAL TYPE APPARATUS

- .Means separating or dissolving a material constituent
- 285 ..And heating means
- 286 ...Including mechanical comminuting or conveying means
- 287 Within treating vessel
- 288 ...Including means removing vapor from treated material
- 289 And direct contact heating fluid means within separating or dissolving chamber vessel
- 290 And indirect contact heating fluid means in separating or dissolving chamber
- 291 .Combined
- 292 .Apparatus for treating solid article or material with fluid chemical
- 293 ..Fluid having simultaneous diverse function
- 294 ..Including flexible or collapsible treating chamber
- 295 ..Including pressure treating chamber (above ambient)
- 296 ...Fluid pressure maintains closure or seal
- 297 ...And rack, support or handling means
- 298 ...And vaporizer, e.g., boiler, etc.
- 299 Constituting treating chamber
- 300 ..Including rack, support or handling means
- 301 ...Apparatus closure operates means immersing article or material in liquid chemical
- 302 ...For treating container or covers therefor
- 303 Container is inverted
- 304 Including endless conveyor
- 305 .Including gas generating means
- 306 .Including means for adding a material to a gas
- 307 .Heat treating vessel with heating means
- 308 ..Including multiple stages
- 309 ..Including comminuting, kneading, or surface-wiping means interior or vessel
- 310 ELEMENTS OR ADJUNCTS
- 311 .Bed support means (e.g., support grid or plate for supporting particulate bed of contact material, etc.)
- 312 .Tube element containing extended surface contact reaction means (e.g., a tube internally coated or packed with a catalyst, etc.)

CROSS-REFERENCE ART COLLECTION RELATING
TO SUBCLASSES 1 THROUGH 43

- 900 DECREASING POLLUTION OR ENVIRONMENTAL IMPACT

CROSS-REFERENCE ART COLLECTIONS

- 901 POLYMER DISSOLVER
- 902 SODIUM CHLORIDE AND POTASSIUM CHLORIDE DISSOLVER
- 903 RADIOACTIVE MATERIAL APPARATUS
- 904 NITROGEN FIXATION MEANS
- 905 MISCELLANEOUS LIQUID STERILIZATION MEANS
- 906 PLASMA OR ION GENERATION MEANS
- 907 CORONA OR GLOW DISCHARGE MEANS

1.1	RADIOACTIVE INGREDIENT CONTAINING	52	.Fluorine or fluorine compound
2	TESTING, MEASURING, IDENTIFICATION OR		containing
	SAFETY FEATURE	53	.Oxyger or chlorine releasing compound
3	.Animal histology aid (e.g., for		containing
	microscopic examination, etc.)	54	.Ammonia, amine or derivative thereof
4	.X-ray contrast		(e.g., urea, etc.)
5	..Halogenated organic compound	55	.Hydroxy carboxylic acid or derivative
	containing		thereof (e.g., methyl salicylate,
6	.Printed or embossed unitary dosage form		etc.)
7.1	.Color or color change (e.g., Ph	56	.Organic sulfate or sulfonate containing
	indicator, fluorescence, etc.)	57	.Phosphate compound containing
9	.In vivo testing or diagnosis (at least	58	.Plant extract of undetermined
	part of reaction in living animal		constitution
	body)	59	TOPICAL SUN OR RADIATION SCREENING, OR
10	.With taste indicator, emetic, irritant	60	TANNING PREPARATIONS
	or detoxicant		.Aromatic acid or derivative containing
11	.Blood typing (e.g., A, O, Rh, etc.)		(e.g., aminobenzoic acid or methyl
14	WITH STRUCTURAL FEATURE		salicylate, etc.)
15	.Embossed, grooved or perforated	61	MANICURE OR PEDICURE COMPOSITIONS
	(nonwoven, non-textile)	62	BLEACH FOR LIVE HAIR OR SKIN (E.G.,
16	.Coated, impregnated or layered		PEROXIDES, ETC.)
17	..Poison containing food bait	63	LIVE SKIN COLORANT CONTAINING
18	..With handle or wick (e.g., candles,	64	.Lip
	etc.)	65	ANTI-PERSPIRANTS OR PERSPIRATION
19	..Sustained or differential release type		DEODORANTS
20	...Plural discrete particles with	66	.Zirconium compound containing
	coating of different thickness or	67	.Zinc compound containing
	material	68	.Aluminum compound containing
21	...Layer or laminated unitary dosage	69	FACE OR BODY POWDERS FOR GROOMING,
	form		ADORNING OR ABSORBING
22	...Leachable discrete particles in	70	LIVE HAIR OR SCALP TREATING COMPOSITIONS
	supporting matrix		(NON-THERAPEUTIC)
23	..Discrete particles with siliceous or	71	.Hair shaping
	calcareous core	72	..Sulfur-containing carboxylic acid or
24	...With stabilizer additive		derivative thereof (e.g.,
25	..Quaternary ammonium compound in		thioglycollic acid, etc.)
	impregnant or coating	73	.Shaving preparation
26	..Biocidal fermentate in impregnant or	74	.Plant extract of undetermined
	coating (e.g., antibiotics, etc.)		constitution
27	..Web, sheet or filament base	75	EMBALMING OR UNDERTAKING COMPOSITIONS
28	...Bandage, dressing or body applicator	76	DEODORANTS (NON-BODY)
29	...Packaging, lining or building	77	ADHESIVE TRAPPING COMPOSITIONS
	material (e.g., wall board, etc.)	78	SOLID SYNTHETIC ORGANIC POLYMER
30	Rodent repelling		CONTAINING
31	..Organic coating	79	.Ion exchange type
32	...Solid synthetic polymer containing	80	.Polyvinyl pyrrolidone per se
33	From ethylenically unsaturated	81	.From acrylic acid or derivative only
	monomer	82	.From aldehyde
34	...Natural gum or resin	83	.Hydrocarbon only (e.g., polyethylene,
35	...Carbohydrate or derivative thereof		ethylenepropylene copolymer, etc.)
36	...Protein or derivative	84	BAITS, ATTRACTANTS, OR LURES (NON-FOOD)
37	Gelatin	85	ANTIBODY OR INTERFERON CONTAINING
38	...Wax, higher fatty acid, higher fatty	86	.Virus induced antibody
	alcohol or derivatives thereof	87	.Bacteria induced antibody
	(e.g., chocolate, etc.)	88	ANTIGEN CONTAINING
39	...Ortho-hydroxybenzoic acid (i.e.,	89	.Virus
	salicylic acid) or derivative	90	..Irradiated
	thereof	91	.Dust or pollen
40	COMBUSTIBLE OR CHEMICALLY REACTIVE TO	92	.Bacteria
	PRODUCE A SMOKE, MIST OR AEROSOL	93	WHOLE LIVE MICROORGANISM OR VIRUS
41	.Elemental sulfur containing		CONTAINING
42	.Nitrate containing	94	ENZYME OR CO-ENZYME CONTAINING
43	EFFERVESCENT OR PRESSURIZED FLUID	95	ANIMAL EXTRACT OF UNDETERMINED
	CONTAINING		CONSTITUTION CONTAINING
44	.Gas produced in situ by chemical	96	.Castle's intrinsic factor
	reaction	97	.Relaxin
45	.Organic pressurized fluid (e.g.,	98	.Venom
	Freons, etc.)	99	.Urine
46	..Powder or dust containing	100	..From pregnant animal
47	..Topical live body grooming or adorning	101	.Blood
	aid (e.g., hair spray,	102	.Cantharides
	antiperspirant, etc.)	103	.Kidney
48	CHEWING GUM TYPE	104	.Digestive system
49	DENTIFRICES (includes mouth wash)	105	.Reproductive system
50	.Ferment containing (e.g., enzymes,	106	.Liver or gall bladder
	bacteria, etc.)	107	..Fish liver
51	.Iodine or iodine compound containing	108	.Pituitary body
		109	..Posterior lobe

CLASS 424 DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS

JUNE 1985

ANIMAL EXTRACT OF UNDETERMINED
CONSTITUTION CONTAINING

- 110 .Pancreas
- 111 .Thyroid
- 112 .Parathyroid
- 113 .Suprarenal
- 114 PLURAL FERMENTATES OF DIFFERENT ORIGIN
(E.G., MIXTURES OF ANTIBIOTICS, ETC.)
- 115 FERMENTATE OF UNKNOWN CHEMICAL STRUCTURE
- 116 .Having a known elemental analysis
(e.g., antibiotic, etc.)
- 117 ..Sulfur containing
- 118 ..45-55% carbon
- 119 ..Over 55 to 58% carbon
- 120 ..Over 58 to 60% carbon
- 121 ..Over 60 to 62% carbon
- 122 ..Over 62% carbon
- 123 .Processes of making, purifying or
recovering (non-fermentation)
- 124 ..Ion exchange or chromatography
- 125 FREE CARBON CONTAINING
- 126 WITH CORROSION INHIBITOR
- 127 INORGANIC ACTIVE INGREDIENT CONTAINING
- 128 .Phosphorus or phosphorus compound
- 129 .Hydrogen cyanide, cyanide, cyanate or
thio analog thereof
- 130 .Peroxide
- 131 .Heavy metal or compound thereof
- 132 ..Silver
- 133 ..Arsenic
- 134 ...With added organic compound
- 135 Organo-arsenate (e.g., Paris Green,
etc.)
- 136 ...Containing manganese or with added
manganese compound
- 137 ...Containing chromium or with added
chromium compound
- 138 ...Lead compound of arsenic
- 139 ...Calcium compound of arsenic
- 140 ..Copper
- 141 ...With added organic compound
- 142 Cellulose-sulfur compound or lignin
sulfonate
- 143 ...Copper sulfate
- 144 ..Manganese
- 145 ..Zinc
- 146 ..Mercury
- 147 ..Iron
- 148 .Boron, (e.g., borax, etc.)
- 149 .Elemental chlorine or elemental
chlorine releasing inorganic compound
(e.g., chlorites, hypochlorites,
etc.)
- 150 .Elemental iodine or iodine compound
- 151 .Fluoride
- 152 ..Silicofluoride
- 153 .Alkali or alkaline earth chloride
- 154 .Aluminum, calcium or magnesium element
or compound containing
- 155 ..Magnesium silicate
- 156 ..Carbonate or bicarbonate
- 157 ..Oxide or hydroxide
- 158 ...With stabilizer or suspending agent
- 159 ...Lime or slaked lime
- 160 Lime-sulfur
- 161 .Carbon disulfide, monoxide or dioxide
- 162 .Elemental sulfur, selenium or compound
thereof
- 163 ..With inorganic siliceous material
- 164 ...With added organic compound
- 165 ...Plant extract of undetermined
constitution
- 166 .Ammonia or ammonium compound containing
- 195.1 PLANT EXTRACT OR PLANT MATERIAL OF
UNDETERMINED CONSTITUTION
- 196.1 .Pine oil, tar, gum, or resin.
- 197.1 .Tobacco or tobacco extract

IN LIEU OF FORMER SUBCLASSES 167-194
AND 198-366, SEE CLASS 514.CLASS 514 IS TO BE CONSIDERED AN
INTEGRAL PART OF CLASS 424; IT FOLLOWS
THE SCHEDULE HIERARCHY AND RETAINS
ALL PERTINENT DEFINITIONS AND CLASS
LINES OF CLASS 424.

DIGESTS

- DIG 1 Aerosol hair preparation
- DIG 2 Resin hair settings
- DIG 3 Hair bleach
- DIG 4 Dandruff
- DIG 5 Stick
- DIG 6 Chelate
- DIG 7 Microporous membranes
- DIG 8 Systemic pesticides
- DIG 9 Fish posts
- DIG 10 Insect repellent
- DIG 11 Termite treating
- DIG 12 Fertilization attaching inhibition
- DIG 13 Burn treatment
- DIG 14 Topical contraceptives and spermacides
- DIG 15 Suppositories

JUNE 1985

NOTE:

In this schedule, many subclasses are based on the groupings of elements in the periodic chart. Below are listed elements in the groups as used in the schedule. Obsolete and archaic names and synonyms for elements are to be found in the class definition.

- Group I metals : Li(Lithium), Na(Sodium), K(Postassium), Rb(Rubidium), Cs(Cesium), Fr(Francium), Cu(Copper), Ag(Silver), and Au(Gold)
- Group II metals : Be(Beryllium), Mg(Magnesium), Ca(calcium), Sr(strontium), Ba(Barium), Ra(Radium), Zn(Zinc), Cd(Cadmium), and Hg(Mercury)
- Group III metals : Sc(Scandium), Y(ttrium), Al(Aluminum), Ga(Gallium), In(Indium), and Tl(Thallium)*
- Group IV metals : Ti(Titanium), Zr(Zirconium), Hf(Hafnium), Ge(Germanium), Sn(Tin), and Pd(Lead)
- Group V metals : V(Vanadium), Nb(Niobium) Ta(Tantalum), As(Arsenic), Sb(Antimony), and Bi(Bismuth)
- Group VI metals : Cr(Chromium), Mo(Molybdenum), W(Wolfram), T(Tungsten), and Po(Polonium)
- Group VII metals : Mn(Manganese), Tc(Technetium), and Re - (Rhenium)
- Group VIII metals : Iron group metals Fe(Iron), Co(Cobalt), Ni(Nickel), and the platinum group metals Ru(Ruthenium), Rh(Rhodium), Pd(Palladium), Os(Osmium), Ir(Iridium), and Pt(Platinum)
- Lanthanides : Elements with atomic numbers 57-71 inclusive, La(Lanthanum), Ce(Cerium), Pr(Praseodymium), Nd(Neodymium), Pm(Promethium), Sm(Samarium), Eu(Europium) Gd-(Gadolinium), Tb(Terbium), Dy(Dysprosium), Ho(Holmium), Er(Erbium), Tm(Thulium), Yb-(Ytterbium and Lu(Lutetium)*
- Alkaline Earth Metals: Ca(Calcium), Sr(Strontium), Ba(Barium), and Ra(Radium)
- Alkali metals : Li(Lithium), Na(Sodium), K(Postassium), Rb(Rubidium), Cs(Cesium), and Fr(Francium)
- Actinides : Elements with atomic numbers 89 and above inclusive, Ac(Actinium), Th(Thorium) Pa(Protactinium), U(Uranium), Np(Neptunium) Pu(Plutonium), Am(Americium), Cm(Curium), Bk(Berkelium), Cf(Californium), Es(Einsteinium), Fm(Fermium), Md(Mendelevium), No(Nobelium), and Lw(Lawrencium)*
- Halogens : F(Fluorine), Cl(Chlorine), Br(Bromine), I(Iodine), and At(Astatine)
- Rare Earth : Lanthanides, Scandium and Yttrium

* La is grouped with the lanthanides and Ac with the Actinides and not with Group III

- | | | | |
|---|--|----|--|
| 1 | HAVING FOREIGN OR DIVERSE FUNCTION (E.G., PREVENT CORROSION, ETC.) | 8 | FORMING OR TREATING A SPHERE, PROCESS ONLY |
| 2 | .With structure having utility in addition to support or carrier | 9 | .Forming other than by liquid immersion |
| 3 | TO BE USED AS A MELT | 10 | .Treating preformed sphere only |
| 4 | IN FORM OF A MEMBRANE | 11 | INCLUDING ION EXCHANGING, EXCEPT ZEOLITES OR PRODUCT THEREOF |
| 5 | IRRADIATION BY, OR APPLICATION OF, ELECTRICAL, MAGNETIC OR WAVE ENERGY | 12 | .For regenerating or rehabilitating catalyst or sorbent |
| 6 | CONTROL RESPONSIVE TO SENSED CONDITION | 20 | REGENERATING OR REHABILITATING CATALYST OR SORBENT |
| 7 | BIOSPECIFIC MATERIAL, OR PRODUCED BY ENZYME OR MICROORGANISM | | |

262

BEST COPY AVAILABLE

CLASS 502 CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR
PROCESS OF MAKING

JUNE 1985

	REGENERATING OR REHABILITATING CATALYST	67	...Mixed zeolites
	OR SORBENT	68	...Mixed with clay
21	.Including segregation of diverse particles	69	...Heterogeneous arrangement
		70	...Gelling in presence of zeolite
22	..Treating with a liquid or treating in a liquid phase, including dissolved or suspended	71	...ZSM Type
		72	...Mixed clays
23	.. "Wet air combustion" oxidation of material submerged in liquid	73	..And Group III or rare earth metal (Al, Ga, In, Tl, Sc, Y) or Lanthanide containing
24	..Including intended dissolution or precipitation of a substantial amount of an ingredient of the ultimate composition	74	..And Group VIII (Iron Group or Platinum Group) containing
		75	..Including chemical reduction of exchanged cation
25	..Using salt or alkaline substance	76	..Coprecipitation
26	...Ammonia or derivative thereof	77	..ZSM type
27	..Using acid	78	..Mordenite type
28	...Organic	79	..Faujasite type (e.g., X or Y, etc.)
29	...Organic liquid	80	..Clay
30	...And gas addition thereto	81	..Acid treating
31	...Hydrocarbon	82	...Plural acid treatment
32	...Halogen containing	83	...Sulfuric or hydrochloric acid
33	...Oxygen containing	84	..And metal, metal oxide, or metal hydroxide
34	..Gas or vapor treating		..Activating treatment
35	..Using halogen containing substance including liquids vaporizable upon contacting spent catalyst or sorbent	85	..Support per se
36	...Fluorine containing	86	CATALYST OR PRECURSOR THEREFOR
37	...Simultaneously or subsequently adding free oxygen or use of oxyhalogen compound	87	..Making catalytic electrode, process only
		100	..Plural component system comprising A - Group I to IV metal hydride or organometallic compound - and B - Group IV to VIII metal, lanthanide or actinide compound - (i.e., alkali metal, Ag, Au, Cu, alkaline earth metal, Be, Mg, Zn, Cd, Hg, Sc, Y, Al, Ga, In, Tl, Ti, Zn, Hf, Ge, Sn or Pb hydride or organometallic compound and Ti, Zr, Hf, Ge, Sn, Pb, V, Nb, Ta, As, Sb, Bi, Cr, Mo, W, Po, Mn, Tc, Re, Iron group, Platinum group, atomic number 57 to 71 inclusive or atomic number 89 or higher compound)
38	..Treating with free oxygen containing gas	101	..Component A metal is Group IA, IIA or IIIA and component B metal is Group IVB to VIIB or VIII (i.e., alkali metal, alkaline earth metal, Be, Mg, Al, Ga, In or Tl and Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re, iron Group or Platinum group) (e.g., Ziegler Catalyst, etc.)
39	...And forming useful by-product	102	...Preparing catalyst or precursor
40	...And adding heat by admixing solid heat carrier		Including comminuting (e.g., milling, grinding, etc.)
41	...In gaseous suspension (e.g., fluidized bed, etc.)		Fluidized bed feature
42	And substantially complete oxidation of carbon monoxide to carbon dioxide within regeneration zone		Including heating to higher temperature
43	Plural distinct serial combustion stages		Utilizing hydrocarbon containing unsaturation not part of benzene ring
44	Indirectly heating or cooling spent material within regeneration zone or prior to entry into regeneration zone	103	Utilizing high molecular weight synthetic polymer
45	...Moving bed (e.g., vertically or horizontally, etc., moving bulk material)		Including plural additions of Component A
46	Generally concurrent flow of oxygen containing gas and material		Utilizing water or compound containing hydroxy bonded to carbon
47	Generally countercurrent flow of oxygen containing gas and material	104	...Containing iodine
48	Generally transverse (i.e., lateral) flow of oxygen containing gas relative to material	105	...Containing two or more different Component B metals
49	...Plural distinct oxidation stages	106	...Containing hydrides or organometallic of two or more different Component A metals
50	...Reactive gas treating after oxidation	107	Magnesium containing
51	...Oxidation gas comprises essentially steam and oxygen	108	And compound containing Silicon-Hydrogen or Silicon-Carbon bond
52	...With control of oxygen content in oxidation gas	109	
53	..Elemental hydrogen	110	
54	..Ammonia or derivative thereof	111	
55	..Steam		
56	..By heat		
60	ZEOLITE OR CLAY, INCLUDING GALLIUM ANALOGS	112	
61	..Gallium containing	113	
62	..Including organic component		
63	..And additional AL or SI containing component	114	
64	..Zeolite		
65	...And rare earth metal (Sc, Y or Lanthanide) containing	115	
66	...And Group VIII (Iron Group or Platinum Group) metal containing	116	

CATALYST OR PRECURSOR THEREFOR		158	..Compound with Silicon-hydrogen bond or organic compound with silicon-carbon bond
..Plural component system comprising A - Group I to IV metal hydride or organometallic compound - and B - Group IV to VIII metal, lanthanide or actinide compound - (i.e., alkali metal, Ag, Au, Cu, alkaline earth metal, Be, Mg, Zn, Cd, Hg, Sc, Y, Al, Ga, In, Tl, Ti, Zn, Hf, Ge, Sn or Pb hydride or organometallic compound and Ti, Zr, Hf, Ge, Sn, Pb, V, Nb, Ta, As, Sb, Bi, Cr, Mo, W, Po, Mn, Tc, Re, Iron group, Platinum group, atomic number 57 to 71 inclusive or atomic number 89 or higher compound)		159	..Resin, natural or synthetic, polysaccharide or polypeptide
..Component A metal is Group IA, IIA or IIIA and component B metal is Group IVB to VIIB or VIII (i.e., alkali metal, alkaline earth metal, Be, Mg, Al, Ga, In or Tl and Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re, iron Group or Platinum group) (e.g., Ziegler Catalyst, etc.)		160	..Peroxygen compound containing
117 ...Component B metal is other than titanium or vanadium		161	..With metal carbonyl or carbon monoxide complex
118 ...And a third component C (i.e., an additive other than a saturated hydrocarbon or an aromatic hydrocarbon free of aliphatic or cycloaliphatic unsaturation)		162	..Organic phosphorus or nitrogen, except the ammonium ion
119 Non-metallic inorganic halogen containing		163	...Phthalocyanine
120 Elemental oxygen or nonmetallic inorganic oxygen-containing material, other than water		164	...Quaternary ammonium or phosphonium
121 Nonmetallic organic phosphorus containing		165	...Copper containing
122 Nonmetallic organic sulfur containing		166	...Rhodium containing
123 Nonmetallic organic nitrogen containing		167	...Organic nitrogen containing
124 Including element in addition to carbon, hydrogen, and nitrogen (e.g., nitro, etc.)		168	..Organic sulfur compound
125 Nonmetallic organic oxygen containing		169	..With metal halide
126 Ether		170	..With metal carboxylate or metal compound and carboxylic acid or anhydride
127 Ester		171	..Organic compound contains metal (e.g., Na-O-Ethyl, etc.)
128 Nonmetallic organic halide		172	..Alcohol, phenol, ether, aldehyde or ketone
129 Metal compound other than which could be produced in situ by reaction of a Group IA, IIA, or Group IIIA metal compound present with a titanium or vanadium compound present		173	..Elemental metal in organic dispersing medium
130 Lead compound		174	..Inorganic carbon containing
131 Tin compound		175	..Cyanide
132 Aluminum compound		176	..Hydroxycarbonate
133 Magnesium compound		177	..Carbide
134 Halogen containing		178	...Silicon carbide
150 ..Organic compound containing		179	Group VA (N, P, As, Sb, Bi) containing
151 ..Method of making including comminuting of solid material (e.g., grinding, crushing, etc.)		180	..Elemental carbon
152 ..Organic compound including carbon-metal bond		181	...And halogen containing
153 ...Diverse metals bonded to carbon		182	...And metal, metal oxide, or metal hydroxide
154 ...Including metal compound containing different metal than that bonded to carbon		183	Of Group II (i.e., alkaline earth, Be, Mg, Zn, Cd or Hg)
155 ...Including phosphorus or sulfur or compound containing nitrogen or phosphorus or sulfur		184	Of Group I (i.e., alkali, Ag, Au or Cu)
156 ...Including alcohol, phenol, or ether		185	Of Group VIII (i.e., iron or platinum group)
157 ...Alkali metal bonded to carbon		200	..Nitrogen compound containing
		201	..Nitrate
		202	..Boron or compound containing same
		203	..Boron halide
		204	..And Group VI metal containing (i.e., Cr, Mo, W or Po)
		205	...And bismuth containing
		206	...Molybdenum containing
		207	..And Group VIII metal containing (i.e., iron or platinum group)
		208	..Phosphorus or compound containing same
		209	..And vanadium containing
		210	..And Group VI metal (i.e., Cr, Mo, W or Po,)
		211	...Molybdenum
		212	And bismuth containing
		213	..And Group VIII metal containing (i.e., iron or platinum group)
		214	..And silicon containing
		215	..Selenium or tellurium or compound containing same
		216	..Sulfur or compound containing same
		217	..Sulfate
		218	...And Group I metal containing (i.e., alkali, Ag, Au or Cu)
		219	..And Group VI metal containing (i.e., Cr, Mo, W or Po)
		220	...Molybdenum containing
		221	..And Group VIII metal containing (i.e., iron or platinum group)
		222	..And Group VIII metal containing (i.e., iron or platinum group)
		223	...Platinum group (i.e., Ru, Rh, Pd, Os, Ir, Pt)

264

CLASS 502 CATALYST, SOLID SORBENT, OR SUPPORT THEREFOR, PRODUCT OR
PROCESS OF MAKING

JUNE 1985

	CATALYST OR PRECURSOR THEREFOR	306	...And Group II metal containing (i.e., alkaline earth, Be, Mg, Zn, Cd or Hg)
224	.Halogen or compound containing same		Zinc
225	..Copper halide	307	...And Group IV metal containing (i.e., Ti, Zr, Hf, Ge, Sn or Pb)
226	..And Group II metal (i.e., alkaline earth, Be, Mg, Zn Cd or Hg)	308	Titanium containing
227	..And Group IV metal (i.e., Ti, Zr, Hf, Ge, Sn or Pb)	309	Tin containing
228	..And Group VI metal (i.e., Cr, Mo, W or Po)	310	...And Group V metal containing (i.e., V, Nb, Ta, As, Sb or Bi)
229	..And Group VIII metal (i.e., iron or platinum group)	311	Vanadium containing
230	...Platinum group (i.e., Ru, Rh, Pd, Os, Ir or Pt)	312	...And Group VIII metal containing (i.e., iron or platinum group)
231	..And Group III metal (i.e., Sc, Y, Al, Ga, In or Tl)	313	Iron group metal and Group III metal containing (i.e., Fe, Co or Ni and Sc, Y, Al, Ga, In or Tl)
232	.Silicon containing or process of making		Nickel containing
233	..Forming silica gel	315	Iron containing
234	...Coprecipitating	316	...And Group I containing (i.e., alkali, Ag, Au or Cu)
235	Group III or rare earth metal, metal oxide, or metal hydroxide containing (i.e., Sc, Y, Al, Ga, In, Tl or lanthanide)	317	Copper containing
236	Group IV metal, metal oxide, or metal hydroxide, (i.e., Ti, Zr, Hf, Ge, Sn or Pb)	318	Of chromium
237	...Metal, metal oxide, or metal hydroxide containing	319	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
238	Of Group III metal (i.e., Sc, Y, Al, Ga, In or Tl)	320	...Of molybdenum
239	Of Group IV metal (i.e., Ti, Zr, Hf, Ge, Sn or Pb)	321	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
240	..With metal, metal oxide, or metal hydroxide	322	...And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
241	...Of Group VII (i.e., Mn, Tc or Re)	323	..Of manganese
242	...Of Group IV (i.e., Ti, Zr, Hf, Ge, Sn or Pb)	324	..Of Group VIII (i.e., iron or platinum group)
243	...Of Group I (i.e., Alkali, Ag, Au or Cu)	325	...Of platinum group metal and of iron group (i.e., Ru, Rh, Pd, Os, Ir, or Pt and Fe, Co or Ni)
244	Of copper	326	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
245	And group VIII metal containing (i.e., iron or platinum group)	327	...And Group II metal containing (i.e., alkaline earth, Be, Mg, Zn, Cd or Hg)
246	...Of Group V (i.e., V, Nb, Ta, As, Sb or Bi)	328	Zinc containing
247	Of vanadium	329	...And Group I metal containing (i.e., alkali, Ag, Au or Cu)
248	And Group VI metal (i.e., Cr, Mo., W or Po)	330	Copper containing
249	Of antimony or bismuth	331	...And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
250	...Of Group II (i.e., alkaline earth, Be, Mg, Zn, Cd or Hg)	332	Of palladium
251	...Magnesium	333	Of platinum
252	And Group VIII metal containing (i.e., iron or platinum group)	334	Of nickel
253	Of zinc, cadmium, or mercury	335	Of iron
254	...Of Group VI (i.e., Cr, Mo, W or Po)	336	Of nickel
255	...Molybdenum	337	Of iron
256	...Chromium	338	...Of palladium or platinum
257	And Group VIII metal containing (i.e., iron or platinum group)	339	..Of Group II (i.e., alkaline earth, Be, Mg, Zn, Cd or Hg)
258	...Of Group VIII (i.e., iron or platinum group)	340	...And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
259	Nickel	341	Of zinc
260	Cobalt	342	...Of zinc
261	...Platinum group (i.e., Ru, Rh, Pd, Os, Ir or Pt)	343	..Of Group I (i.e., alkali, Ag, Au or Cu)
262	Platinum or palladium	344	...Of copper
263	...Of Group III or lanthanide group (i.e., Sc, Y, Al, Ga, In, Tl, or atomic number 57 to 71 inclusive)	345	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
300	.Metal, metal oxide or metal hydroxide	346	...Of silver
301	..Raney type	347	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
302	..Of lanthanide series (i.e., atomic number 57 to 71 inclusive)	348	..Of Group IV (i.e., Ti, Zr, Hf, Ge, Sn or Pb)
303	...Lanthanum	349	...Of titanium
304	...Cerium	350	And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
305	..Of Group VI (i.e., Cr, Mo, W or Po)	351	...Of tin
		352	..Of Group V (i.e., V, Nb, Ta, As, Sb or Bi)
		353	...And Group III metal containing (i.e., Sc, Y, Al, Ga, In or Tl)
		354	

JUNE 1985

	CATALYST OR PRECURSOR THEREFOR	509	.Nitrogen containing organic compound
355	.Metal, metal oxide or metal hydroxide	510	..Also containing hydroxyl bonded to
	..Of Group III (i.e., Sc, Y, Al, Ga, In	511	carbon, e.g., carboxylic acid, etc.
	or Ti)		..Two or more nitrogen atoms bonded to
400	SOLID SORBENT		different carbon atoms
401	.Organic	512	.Carboxylic acid or salt thereof other
402	..Synthetic resin		than formic, acetic, or oxalic acid
403	..Protein	513	.Alcohol, phenol, or ether or metallate
404	..Carbohydrate		thereof
405	..Inorganic gel containing	514	PROCESS APPLICABLE EITHER TO PREPARING
406	.Having specifically intended		OR TO REGENERATING OR TO
	extraneously added iron group (i.e.,		REHABILITATING CATALYST OR SORBENT
	Fe, Co, Ni) component	515	SPECIFIC CONTAMINANT REMOVAL
407	.Silicon containing	516	.Metal contaminant removal
408	..Acid treated	517	.Sulfur or sulfur compound removal
409	..Quartz	518	.Carbonaceous contaminant
410	..Magnesium silicate (e.g., asbestos,	519	REAGENT GRADE (E.G., ULTRA PURE)
	vermiculite, etc.)	520	SUPPRESSED SIDE REACTIONS
411	..Having extraneously added alkali	521	METAL CONTAMINANT PASSIVATION
	metal, or alkaline earth metal	522	RADIANT OR WAVE ENERGY ACTIVATED
412	..Diatomaceous earth	523	MISCELLANEOUS SPECIFIC TECHNIQUES OF
413	..Free carbon containing		GENERAL APPLICABILITY
414	.Aluminum containing	524	SPINEL
415	..Alumina (i.e., dialuminum trioxide)	525	PEROVSKITE
416	..Free carbon containing	526	SORBENT FOR FLUID STORAGE, OTHER THAN AN
417	..And specified adde active sorbent	527	ALLOY FOR HYDROGEN STORAGE
	material		PECULIAR STRUCTURE OR PHYSICAL FORM
418	..Process utilizing solid or liquid		
	source carbonizable material, or		
	product thereof		
419	...Producing diverse useful byproduct		
420	...Temperature vs. time factor		
421	...Including recycling product or		
	intermediate thereof to prior stage		
	of process		
422	...Including diverting part of source to		
	provide fuel for process		
423	...Adding nongaseous inorganic, or		
	inorganic yielding component, prior		
	to or during process		
424	Zinc containing		
425	Phosphorus containing		
426	Acid		
427	Alkali metal, alkaline earth metal,		
	or magnesium containing		
428	...Including pelletizing or briquetting		
	and subsequently comminuting		
429	Using carbonaceous binder		
430	...Treating with gas		
431	Fluidized bed having specified		
	parameter		
432	Specified atmosphere		
433	Including free oxygen		
434	And subsequent diverse gas		
435	Exposure to hot flue or exhaust gas		
436	...Diverse temperatures		
437	...Specified source (e.g., peach pit,		
	etc.)		
438	..Chemically reducing an oxide or		
	product thereof		
439	MISCELLANEOUS (E.G., CARRIER OR SUPPORT		
	PER SE OR PROCESS OF MAKING, ETC.)		
	CROSS-REFERENCE ART COLLECTIONS		
500	STABILIZED		
501	.For multi-regenerability		
502	.Crystallinity		
503	.Crush strength		
504	.Abrasion resistance		
506	METHOD OF MAKING INORGANIC COMPOSITION		
	UTILIZING ORGANIC COMPOUND (EXCEPT		
	FORMIC, ACETIC, OR OXALIC ACID OR SALT		
	THEREOF)		
507	.Synthetic resin, natural resin,		
	polysaccharide, or polypeptide		
508	.Sulfur containing organic compound		

266

BEST COPY AVAILABLE

JUNE 1985

Class 514 is to be considered an integral part of Class 424 (after subclass 197.1) and follows the schedule hierarchy, retaining all pertinent definitions and class lines of Class 424.

Class 514 is to be considered an integral part of Class 424 (after subclass 197.1 and follows the schedule hierarchy, retaining all pertinent definitions and class lines of Class 424.

- | | | | |
|----|--|----|--|
| 1 | DESIGNATED ORGANIC ACTIVE INGREDIENT | 33 | ...Oxygen of the saccharide radical |
| 2 | CONTAINING (DOAI) | | bonded directly to a polycyclic ring |
| 3 | ..Peptide containing (e.g., protein, | 34 | Oxygen of the saccharide radical |
| 4 | peptides, fibrinogen, etc.) DOAI | | bonded directly to a polycyclic |
| 5 | ..Insulin or derivative | 35 | ring system of four carbocyclic |
| 6 | ...With an additional active ingredient | | rings (e.g., daunomycin, etc.) |
| 7 | ..Iodine containing | 36 | ...Oxygen of the saccharide radical |
| 8 | ..Heavy metal containing (e.g., | | bonded directly to a cyclohexyl |
| 9 | hemoglobin, etc.) | 37 | ring |
| 10 | ..Phosphorus containing | 38 | Two or more nitrogen atoms bonded |
| 11 | ..Glycoprotein (carbohydrate containing) | | directly to the cyclohexyl ring |
| 12 | ..Cyclopeptides | 39 | The nitrogen atoms are in N-C(=N)-N |
| 13 | ...Bicyclic | | groups (e.g., streptomycin, etc.) |
| 14 | ...Monocyclic | 40 | Two saccharide radicals bonded |
| 15 | ..25 or more peptide repeating units in | | through only oxygen to adjacent |
| 16 | known peptide chain structure | 41 | ring carbons of the cyclohexyl |
| 17 | ..16 to 24 peptide repeating units in | 42 | ring |
| 18 | known peptide chain | 43 | Three or more saccharide radicals |
| 19 | ..12 to 15 peptide repeating units in | | (e.g., neomycin, etc.) |
| 20 | known peptide chain | 44 | Two saccharide radicals bonded |
| 21 | ..9 to 11 peptide repeating units in | | through only oxygen to 4- and 6- |
| | known peptide chain | 45 | positions of the cyclohexyl ring |
| | ..7 or 8 peptide repeating units in | 46 | Kanamycin or derivative |
| | known peptide chain | 47 | ..N-glycoside |
| | ..5 or 6 peptide repeating units in | 48 | ...Nitrogen containing hetero ring |
| | known peptide chain | 49 | Polynucleotide (e.g., RNA, DNA, |
| | ..3 or 4 peptide repeating units in | | etc.) |
| | known peptide chain | 50 | Purines (including hydrogenated) |
| | ..2 peptide repeating units in known | 51 | (e.g., adenine, guanine, etc.) |
| | peptide chain | 52 | Adenosine or derivative |
| | ...Guanidine containing | 53 | Phosphorus containing |
| | ..Produced by or extracted from animal | 54 | Phosphorus containing |
| | tissue | 55 | Pyrimidines (including hydrogenated) |
| | | 56 | (e.g., cytosine, etc.) |
| | | 57 | 2,4-diketone pyrimidine or |
| | | 58 | derivative (e.g., uracil, etc.) |
| | | 59 | Phosphorus containing |
| | | 60 | Phosphorus containing (e.g., Vitamin |
| | | 61 | B12, etc.) |
| | | 62 | ..Dissaccharide |
| | | 63 | ..Polysaccharide |
| | | 64 | ...Chitin or derivative |
| | | 65 | ...Heparin or derivative |
| | | 66 | ...Cellulose or derivative |
| | | 67 | ...Dextrin or derivative |
| | | 68 | ...Dextran or derivative |
| | | 69 | ...Starch or derivative |
| | | 70 | ...Tri- or tetrasaccharide |
| | | 71 | ..Glucosamine or derivative |
| | | 72 | ..Silicon containing DOAI |
| | | 73 | ..Boron containing DOAI |
| | | 74 | ..Pyrethrum plant derived material or |
| | | 75 | plant derived rotenone compound |
| | | | containing DOAI |
| | | | ..With heterocyclic compound |
| | | | ...Methylenedioxyphenyl group containing |
| | | | (e.g., piperonyl butoxide, etc.) |
| | | | ..With carbocyclic acid ester |
| | | | ..With carboxylic acid metal salt |
| | | | ..With organic nitrogen containing |
| | | | compound |
| | | | ...Sulfur containing organic nitrogen |
| | | | compound |
| | | | ..With organic oxygen containing |
| | | | compound |
| | | | ...Phosphorus or halogen containing |
| | | | organic oxygen compound |
| | | | ..With hydrocarbon or haloalkyl |
| | | | Phosphorus containing other than solely |
| | | | as part of an inorganic ion in an |
| | | | addition salt DOAI |

Note: See subclasses 800-809 for art collections pertaining to subclasses 1-21.

- | | |
|----|--|
| 22 | ..Lignin or derivative DOAI |
| 23 | ..Carbohydrate (i.e., saccharide radical |
| 24 | containing) DOAI |
| 25 | ..S-glycoside |
| 26 | ..O-glycoside |
| 27 | ...Cyclopentanohydrophenanthrene ring |
| | system |
| 28 | ...Oxygen of the saccharide radical |
| 29 | bonded directly to a nonsaccharide |
| | hetero ring or a polycyclic ring |
| | system which contains a |
| | nonsaccharide hetero ring |
| 30 | The hetero ring has 8 or more ring |
| | carbons |
| 31 | The hetero ring has exactly 13 ring |
| | carbons (e.g., erythromycin, |
| | etc.) |
| 32 | The hetero ring has exactly 15 ring |
| | carbons |
| | The hetero ring has 20 or more ring |
| | carbons (e.g., nystatin, etc.) |
| | ...Oxygen of the saccharide radical |
| | bonded to a nonsaccharide hetero |
| | ring by acyclic carbon bonding |

267

BEST COPY AVAILABLE

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	114	..Nitrogen, other than nitro or nitroso, bonded indirectly to phosphorus
..Phosphorus containing other than solely as part of an inorganic ion in an addition salt DOAI	115	...N-C(=X)-N containing (X is chalcogen)
76 ..Amine addition salt of organic phosphorus containing acid	116	...Sulfur single bonded directly to nitrogen
77 ..Inner salt (e.g., betaine, etc.)	117	N-(O=S(=O)) containing (i.e., sulfonamides)
78 ...Lecithins	118	...Phosphorus single bonded directly to nitrogen
79 ..Nitrogen containing hetero ring	119	...C(=O)N containing
80 ...Polycyclo ring system having a ring nitrogen in the system	120	..C=O other than as ketone or aldehyde, attached directly or indirectly to phosphorus
81 Nonshared hetero atoms in at least two rings of the polycyclo ring system	121	...Plural C=O groups, other than as ketone or aldehyde
82 Quinolinylnyl or isoquinolinylnyl (including hydrogenated)	122	Malathion
83 ...Hetero ring is three-membered consisting of one nitrogen and two carbons	123	With N-C(=O)-O containing compound
84 ...Hetero ring is six-membered consisting of three nitrogens and three carbons	124	...C=O, other than as ketone or aldehyde, attached to a benzene ring
85 ...Hetero ring is six-membered consisting of two nitrogens and four carbons	125	..Ketone or aldehyde containing
86 Nitrogen atoms occupy 1 and 3-positions	126	..Sulfur not bonded directly to phosphorus
87 PX- bonded directly to 1,3-diazine at 2- position (X is chalcogen)	127	...Thioether, sulfoxide or sulfone
88 Two or more PX- groups attached to the same 1,3-diazine (X is chalcogen)	128	Sulfur bonded directly to a benzene ring
89 ...Hetero ring is six-membered and includes only one ring nitrogen	129	..Oxygen bonded directly to a carbon or hydrogen and wherein the oxygen is not bonded directly to phosphorus
90 Chalcogen in the six-membered hetero ring	130	...The oxygen is bonded directly to a benzene ring
91 ...Hetero ring is five-membered	131	..Nitro group bonded to a carbon
92 Two or more hetero atoms in the five-membered ring	132	...Nitro group is directly bonded to a benzene ring which benzene ring is either bonded directly bonded to phosphorus or indirectly bonded to phosphorus through a chalcogen
93 Triazoles (including hydrogenated)	133	Two or more such benzene rings
94 Diazoles (including hydrogenated)	134	..Acyclic carbon to carbon unsaturation
95 ...Sulfur containing hetero ring	135	...Alkyne
96 ...Polycyclo ring system having the hetero ring as one of the cyclos	136	...Phosphate ester having three ester groups (e.g., DDVP, etc.)
97 ...Two or more sulfurs in the hetero ring	137	..Nitrogen bonded directly to phosphorus
98 ...Oxygen in the hetero ring	138	...N-P-N or N-N-P containing
99 ..Oxygen containing hetero ring	139	..Phosphorus bonded directly to halogen
100 ...Polycyclo ring system having the hetero ring as one of the cyclos	140	..(C)(R)P=X(XC) containing (i.e., Phosphinate (X is chalcogen; R is C or H)
101 ...Two or more oxygen in the hetero ring	141	..(CX-) (C)P=X(XH) or (CX-) (R)P=X(XC) containing (e.g., phosphonate, etc.) (X is chalcogen; R is C or H)
102 ..Two or more phosphorus atoms directly or indirectly bonded together by only covalent bonds	142	..(CX-)(C)P(C), (CX-)(RX-)P(C), (C X-)P(XH)(XH) or (CX-)(CX-)P(-XR) containing (X is chalcogen; R is C or H) (e.g., phosphinite, phosphite, etc.)
103 ...Phosphorus acid ester of polyhydric alcohol or thioalcohol (e.g., P-X-R-X-P group, etc., wherein X is chalcogen and R is the residue of the polyhydric alcohol or thioalcohol)	143	..Ester of (HX)P=X(XH)(XH) (X is chalcogen) (e.g., phosphate, etc.)
104 Benzene ring in the alcohol moiety	144	...Triester
105 ...Phosphorus is part of a ring	145	Three benzene rings bonded directly to chalcogen
106 ...P-O-P or P-S-P containing (e.g., anhydrides, etc.)	146	Two benzene rings bonded directly to chalcogen
107 ...Benzene ring containing	147	One benzene ring bonded directly to chalcogen
108 ...Acyclic and contains at least one carbon atom between the phosphorus atoms	148	...Diester
109 ..P-X-X containing (X is chalcogen)	149	..Azoxy DOAI
110 ..Phosphorus is part of a ring	150	..Acyclic nitrogen double bonded to acyclic nitrogen, acyclic nitrogen triple bonded to acyclic nitrogen or azide DOAI
111 ...Polycyclo ring system having the phosphorus containing ring as one of the cyclos	151	..Acyclic C=N=N-M containing
112 ..Cyano or isocyano containing	152	..3,10-dihydroxy-2-naphthacene carboxamide or derivative (e.g., tetracycline, etc.) DOAI
113 ...Cyano or isocyano bonded directly to a benzene ring	153	..With stabilizer or preservative

268

BEST COPY AVAILABLE

CLASS 514 DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	190	...Mercury
.3,10-dihydroxy-2-naphthacene	191	..Aluminum (including salts)
carboxamide or derivative (e.g., tetracycline, etc.) DOAI	192	..1-thia-4-aza-bicyclo (3.2.0) heptane ring containing (including dehydrogenated) (e.g., penicillins, etc.)
154 ..With an additional active ingredient (excludes reaction product or complex)	193	...Spiro or additional polycyclo ring system
155 .Para-N-benzene - sulfoxy-N containing DOAI, and said benzene ring is not part of a polycyclo ring system	194	...6,6-di-substituted
156 ..Hetero ring containing	195	...3-position substituent contains -COOC- group
157 ...The hetero ring is six-membered and includes at least two nitrogens and no other hetero atoms	196	...6-position substituent contains hetero ring
158 ...The hetero ring is five-membered	197	...6-position substituent contains carbocyclic ring
159 .Ortho-hydroxybenzoic acid (i.e., salicylic acid) or derivative DOAI	198	Ampicillin per se or salt thereof
160 ..With additional ortho-hydroxybenzoic acid compound	199	Penicillin G per se or salt thereof (e.g., procaine penicillin G, etc.)
161 ..With heterocyclic compound	200	..1-thia-5-aza-bicyclo (4.2.0) octane ring containing (including dehydrogenated) (e.g., cephalosporins, etc.)
162 ..With organic nitrogen containing compound	201	...7,7-di-substituted
163 ..With carboxylic acid, ester or metal salt thereof	202	...Additional hetero ring
164 ..With organic oxygen containing compound	203	3-position substituent contains pyridine ring
165 ..Aspirin per se (i.e., 2-(acetyloxy)benzoic acid)	204	3-position substituent contains sulfur
166 ..Nitrogen containing (e.g., anilides, etc.)	205	The additional hetero ring is part of a polycyclo ring system
167 .9,10-seco-cyclopentanohydrophenanthrene ring system (e.g., vitamin D, etc.) DOAI	206	7-position substituent contains hetero ring
168 ..With a vitamin type active ingredient	207	Alkyl, hydroxyalkyl, alkoxyalkyl, or alkanoyloxyalkyl bonded directly to 3-position
169 .Cyclopentanohydrophenanthrene ring system DOAI	208	...Sulfur containing substituent
170 ..Plural Compounds containing cyclopentanohydrophenanthrene ring systems	209	...Alkyl, hydroxyalkyl, alkoxyalkyl, or alkanoyloxyalkyl bonded directly to 3-position
171 ..With additional active ingredient	210	..Hetero ring is four-membered and includes at least one nitrogen
172 ..Hetero ring containing	211	..Hetero ring is seven-membered and includes at least one nitrogen and at least one hetero atom other than nitrogen
173 ...Spiro ring system	212	..Hetero ring is seven-membered consisting of one nitrogen and six carbon atoms
174 ...-O-C-O- is part of a hetero ring (e.g., acetamide, etc.)	213	...Polycyclo ring system having the seven-membered hetero ring as one of the cyclos
175 ...-C(=O)-O- is part of a hetero ring (e.g., lactone, etc.)	214	Ring nitrogen is shared by two or three of the cyclos
176 ...Nitrogen containing hetero ring	215	Additional hetero atom in the polycyclo ring system
177 ..Oxygen double bonded to a ring carbon of the cyclopentanohydrophenanthrene ring system	216	Two of the cyclos share at least three ring carbons (i.e., bridged)
178 ...Oxygen single bonded to a ring carbon of the cyclopentanohydrophenanthrene ring system	217	Tricyclo ring system having the seven-membered hetero ring as one of the cyclos
179 Modified C-ring (except methyl in 13-position) (e.g., double bond containing, substituted, etc.)	218	..Hetero ring is seven-membered consisting of two nitrogens and five carbon atoms
180 9-position substituted	219	...Polycyclo ring system having the seven-membered hetero ring as one of the cyclos
181 21-position substituted	220	Tricyclo ring system having the seven-membered hetero ring as one of the cyclos
182 ..Oxygen single bonded to a ring carbon of the cyclopentanohydrophenanthrene ring system	221	Bicyclo ring system having the seven-membered hetero ring as one of the cyclos
183 .Heterocyclic carbon compounds containing a hetero ring having chalcogen (i.e., O, S, Se or Te) or nitrogen as the only ring hetero atoms DOAI	222	..Hetero ring is six-membered and includes at least nitrogen and sulfur as hetero atoms
184 ..Heavy metal containing (including salts)	223	...Phenothiazines (including hydrogenated)
185 ...Polycyclo ring system	224	Plural hetero rings
186 Bicyclo ring system		
187 Quinolines or isoquinolines (including hydrogenated)		
188 ...Hetero ring is six-membered consisting of one nitrogen and five carbons		
189 ...Tin		

269

BEST COPY AVAILABLE

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	264	With an additional active ingredient or stabilizer
.Heterocyclic carbon compounds containing a hetero ring having chalcogen (i.e., O,S,Se or Te) or nitrogen as the only ring hetero atoms DOAI	265	Additional hetero ring
..Hetero ring is six-membered and includes at least nitrogen and sulfur as hetero atoms	266	Additional hetero ring
225 ...1,4-benzothiazines (including hydrogenated)	267	Tricyclo ring system having 1,3-diazine as one of the cyclos
226 ...1,3-thiazines	268	Perimidine (including hydrogenated)
227 ..Hetero ring is six-membered and includes at least nitrogen and oxygen as hetero atoms	269	Pyrimidines with chalcogen bonded directly to a ring carbon of said pyrimidine moiety
228 ...Sulfur containing	270	Barbituric acid or derivative (including thioanalogs)
229 Nitrogen bonded directly to the sulfur	271	Two or more barbituric acid compounds or with an additional active ingredient or stabilizer
230 Sulfur containing hetero ring	272	Nitrogen bonded directly to the 1,3-diazine at 2-position
231 Polycyclo ring system	273	The nitrogen is part of a hetero ring
232 Mercaptan, mercaptide or thioether	274	Chalcogen bonded directly to pyrimidine at 2-position
233 ...C=O other than as ketone or aldehyde	275	Nitrogen bonded directly to the 1,3-diazine at 2-position by a single bond
234 N-C(=O) containing	276	Thiamines (e.g., vitamin B1, etc.)
235 N-C(=O)-N containing	277	..Hetero ring is six-membered consisting of one nitrogen and five carbon atoms
236 Carboxylic acid ester (including lactones)	278	...Spiro ring system
237 ...Acyclic nitrogen, other than nitro or nitroso, bonded to carbon	279	...Polycyclo ring system having the six-membered hetero ring as one of the cyclos
238 ...Acyclic oxygen containing	280	Pentacyclo ring system having the six-membered hetero ring as one of the cyclos
239 Polycyclo ring system	281	Two of the cyclos share at least three ring members (i.e., bridged)
240 The oxygen bonded directly to benzene ring	282	One of the five cyclos is five-membered and includes ring chalcogen (e.g., codeine, morphine, etc.)
241 ..Hetero ring is six-membered consisting of three nitrogens and three carbon atoms	283	Ring nitrogen in the pentacyclo ring system is shared by five-membered cyclo and six-membered cyclo (e.g., vincamine, etc.)
242 ...Asymmetrical (e.g., 1,2,4-triazine, etc.)	284	Tetracyclo ring system having the six-membered hetero ring as one of the cyclos
243 Polycyclo ring system having the hetero ring as one of the cyclos	285	Plural hetero atoms in the tetracyclo ring system (e.g., acronycines, etc.)
244 ...Hexamethylenetetramines	286	Two of the cyclos share at least three ring members (i.e., bridged)
245 ...Nitrogen bonded directly to ring carbon of the hetero ring	287	Three or more hetero atoms in the tetracyclo ring system
246 ...Polycyclo ring system having a 1,3,5-triazine as one of the cyclos	288	Ring carbon is shared by three of the cyclos
247 ..Hetero ring is six-membered consisting of two nitrogens and four carbon atoms (e.g., pyridazines, etc.)	289	Two of the cyclos share at least three ring members (i.e., bridged) (e.g., morphinans, etc.)
248 ...Polycyclo ring system having a 1,2- or 1,4-diazine as one of the cyclos	290	Tricyclo ring system having the six-membered hetero ring as one of the cyclos
249 1,4-diazine as one of the cyclos	291	Plural hetero atoms in the tricyclo ring system
250 At least three rings in the polycyclo ring system	292	Plural ring nitrogens in the tricyclo ring system
251 Isalloxazine (e.g., riboflavins, Vitamin B2, etc.)	293	Three or more hetero atoms in the tricyclo ring system
252 ...1,2- or 1,4-diazine compound having two or more hetero rings	294	Ring nitrogen is shared by two of the cyclos
253 Hetero ring other than 1,2- or 1,4-diazine is part of a polycyclo ring system		
254 Diazine is bonded directly to the polycyclo ring system		
255 ...1,4-diazines		
256 ...1,3-diazines (e.g., pyrimidines, etc.)		
257 Polycyclo ring system having 1,3-diazine as one of the cyclos		
258 Bicyclo ring system having 1,3-diazine as one of the cyclos		
259 Quinazolines (including hydrogenated)		
260 Nitrogen bonded directly to the 1,3-diazine at 2-position		
261 Purines (including hydrogenated)		
262 Chalcogen bonded directly to a ring carbon of the purine		
263 At both 2- and 6-positions (e.g., theophylline, etc.)		

210

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	320	Hetero ring in the polycyclo ring system
.Heterocyclic carbon compounds containing a hetero ring having chalcogen (i.e., O,S,Se or Te) or nitrogen as the only ring hetero atoms DOAI	321	Plural hetero atoms in the polycyclo ring system
..Hetero ring is six-membered consisting of one nitrogen and five carbon atoms	322	Plural ring nitrogens in the polycyclo ring system
...Polycyclo ring system having the six-membered hetero ring as one of the cyclos	323	Ring nitrogen in the polycyclo ring system
....Tricyclo ring system having the six-membered hetero ring as one of the cyclos	324	Ring sulfur in the polycyclo ring system
295 Two of the cyclos share at least three ring carbons (i.e., bridged) (e.g., benzomorphans, etc.)	325	Polycyclo ring system is tricyclo-carbocyclic
296 Ring carbons shared by each of the three cyclos (e.g., 1,8-naphthalimides, etc.)	326	The additional ring is a hetero ring
297 Acridines (including hydrogenated)	327	Chalcogen bonded directly to ring carbon of the piperidine ring
298 Phenanthridines (including hydrogenated)	328	Plural chalcogens bonded directly to ring carbons of the piperidine ring
299 Bicyclo ring system having the six-membered hetero ring as one of the cyclos	329	Nitrogen attached directly to the piperidine ring by nonionic bonding
300 Plural hetero atoms in the bicyclo ring system	330	C=X bonded directly to the piperidine ring (X is chalcogen)
301 Ring sulfur in the bicyclo ring system	331	Nitrogen attached indirectly to the piperidine ring by nonionic bonding
302 Ring oxygen in the bicyclo ring system	332	...Plural six-membered hetero rings consisting of one nitrogen and five carbon atoms
303 Exactly three ring nitrogens in the bicyclo ring system	333	Additional hetero ring other than the six-membered hetero rings
304 Tropanes (including nor or dehydro form)	334	The six-membered hetero rings are bonded directly to each other
305 Quinuclidines (including unsaturation)	335	Chalcogen bonded directly to a ring carbon of the six-membered hetero ring
306 Quinolizines (including hydrogenated)	336	...Additional hetero ring containing
307 Isoquinolines (including hydrogenated)	337	The additional hetero ring is one of the cyclos in a polycyclo ring system
308 Plural isoquinoline ring systems attached directly or indirectly to each other by nonionic bonding	338	Plural hetero atoms in the polycyclo ring system
309 Chalcogen attached directly to the six-membered hetero ring by nonionic bonding	339	Ring nitrogen in the polycyclo ring system
310 Nitrogen, other than as nitro or nitroso, attached directly to the isoquinoline ring system by nonionic bonding	340	Ring nitrogen in the additional hetero ring (e.g., oxazole, etc.)
311 Quinolines (including hydrogenated)	341	The additional hetero ring consists of two nitrogens and three carbons
312 Chalcogen attached directly to the six-membered hetero ring by nonionic bonding	342	Ring sulfur in the additional hetero ring
313 Nitrogen, other than as nitro or nitroso, attached directly to the six-membered hetero ring by nonionic bonding	343	The additional hetero ring consists of one nitrogen and four carbons (e.g., nicotine, etc.)
314 Additional hetero ring attached directly or indirectly to the quinoline ring system by nonionic bonding	344	...Cyano bonded directly to the six-membered hetero ring
315 ...Piperidines	345	...Chalcogen bonded directly to ring carbon of the six-membered hetero ring
316 Plural piperidine rings	346	Chalcogen and acyclic nitrogen bonded directly to the same carbon
317 Additional ring containing	347	Chalcogen bonded directly to chalcogen
318 The additional ring is a six-membered hetero ring consisting of one nitrogen and five carbon atoms	348	Chalcogens bonded directly to at least two ring carbons of the six-membered hetero ring
319 The additional ring is one of the cyclos in a polycyclo ring system	349	Nitrogen attached directly to the six-membered hetero ring by nonionic bonding
	350	C=O bonded directly to the six-membered hetero ring
	351	Nitrogen attached indirectly to the six-membered hetero ring by nonionic bonding
	352	...Nitrogen attached directly to the six-membered hetero ring by nonionic bonding

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	384	Chalcogen bonded directly to the triazole ring
..Heterocyclic carbon compounds containing a hetero ring having chalcogen (i.e., O,S,Se or Te) or nitrogen as the only ring hetero atoms DOAI	385	1,3-diazoles
..Hetero ring is six-membered consisting of one nitrogen and five carbon atoms	386	Divalent chalcogen or acyclic nitrogen double bonded directly to ring carbon of the diazole ring, or tautomeric equivalent
...Nitrogen attached directly to the six-membered hetero ring by nonionic bonding	387	Polycyclo ring system having the diazole ring as one of the cyclos
353 Plural acyclic nitrogens bonded directly to the same carbon or bonded directly to each other	388	Nitrogen double bonded directly at 2-position of the diazole ring, or tautomeric equivalent
354 ...C=O bonded directly to the six-membered hetero ring	389	Divalent chalcogen or acyclic nitrogen double bonded directly at both 2- and 4- positions, or tautomeric equivalent (e.g., hydantoin, etc.)
355 At 3-position	390	Chalcogen or nitrogen bonded directly at 1-, 3-, or 5-position by nonionic bonding
356 C=O in a C(=O)O group (e.g., nicotinic acid, etc.)	391	Benzene ring bonded directly to the diazole ring by nonionic bonding
357 ...Nitrogen attached indirectly to the six-membered hetero ring by nonionic bonding	392	Divalent chalcogen or acyclic nitrogen double bonded at 2-position, or tautomeric equivalent
358 ...The ring nitrogen of the six-membered hetero ring is pentavalent (e.g., quaternary pyridinium salt, etc.)	393	Polycyclo ring system having the diazole ring as one of the cyclos
359 ..Five-membered hetero ring containing at least one nitrogen ring atom (e.g., 1,2,3-triazoles, etc.)	394	Benzo fused at 4,5-positions of the diazole ring
360 ...Plural ring chalcogens in the hetero ring	395	Chalcogen or nitrogen bonded directly at 1-, 2- or 3-position of the diazole ring by nonionic bonding
361 ...Plural ring nitrogens and a single chalcogen in the hetero ring	396	Imidazoles
362 1,2,5-thiadiazoles (including hydrogenated)	397	Additional hetero ring
363 1,3,4-thiadiazoles (including hydrogenated)	398	Chalcogen or nitrogen bonded directly to the imidazole ring by nonionic bonding
364 Oxadiazoles (including hydrogenated)	399	Chalcogen or nitrogen bonded indirectly to the imidazole ring by nonionic bonding
365 1,3-thiazoles (including hydrogenated)	400	At imidazole ring carbon
366 Polycyclo ring system having the thiazole ring as one of the cyclos	401	2-imidazolines
367 Bicyclo ring system having the thiazole ring as one of the cyclos	402	Additional hetero ring
368 Ring nitrogen is shared by the cyclos of the bicyclo ring system (e.g., tetramisole, etc.)	403	1,2-diazoles
369 Chalcogen bonded directly to ring carbon of the thiazole ring	404	Divalent chalcogen or acyclic nitrogen double bonded directly to ring carbon of the diazole ring, or tautomeric equivalent
370 Nitrogen bonded directly to ring carbon of the thiazole ring	405	Polycyclo ring system having the diazole ring as one of the cyclos
371 C=X bonded directly to the nitrogen which is bonded directly to the thiazole ring (X is chalcogen)	406	Pyrazoles
372 ...1,2-thiazoles (including hydrogenated)	407	Chalcogen or nitrogen bonded directly to the pyrazole ring by nonionic bonding
373 Polycyclo ring system having the thiazole ring as one of the cyclos	408	...The five-membered hetero ring consists of one nitrogen and four carbons
374 ...1,3-oxazoles (including hydrogenated)	409	Spiro ring system
375 Polycyclo ring system having the oxazole ring as one of the cyclos	410	Polycyclo ring system having the five-membered hetero ring as one of the cyclos
376 Chalcogen bonded directly to ring carbon of the oxazole ring	411	Tricyclo ring system having the five-membered hetero ring as one of the cyclos
377 Nitrogen bonded directly to ring carbon of the oxazole ring	412	Bicyclo ring system having the five-membered hetero ring as one of the cyclos
378 ...1,2-oxazoles (including hydrogenated)	413	Ring nitrogen is shared by the cyclos of the bicyclo ring system
379 Polycyclo ring system having the oxazole ring as one of the cyclos	414	Additional hetero ring which is not part of the bicyclo ring system
380 Chalcogen or nitrogen bonded directly to ring carbon of the oxazole ring		
381 ...Tetrazoles (including hydrogenated)		
382 Additional chalcogen containing hetero ring		
383 ...1,2,4-triazoles (including hydrogenated)		

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	436	Two ring sulfurs in the hetero ring
..Heterocyclic carbon compounds containing a hetero ring having chalcogen (i.e., O,S,Se or Te) or nitrogen as the only ring hetero atoms DOAI	437	Tricyclo ring system having the hetero ring as one of the cyclos
...Five-membered hetero ring containing at least one nitrogen ring atom (e.g., 1,2,3-triazoles, etc.)	438	...The hetero ring is five-membered
...The five-membered hetero ring consists of one nitrogen and four carbons	439	Plural hetero atoms in the hetero ring
....Polycyclo ring system having the five-membered hetero ring as one of the cyclos	440	Only two ring sulfurs in the hetero ring
.....Bicyclo ring system having the five-membered hetero ring as one of the cyclos	441	Chalcogen bonded directly to ring carbon of the hetero ring
415 The bicyclo ring system consists of the five-membered hetero ring and a benzene ring (e.g., indole, etc.)	442	Nitrogen bonded directly to the hetero ring by nonionic bonding
416 The ring nitrogen is bonded directly to nonshared ring carbons of the five-membered hetero ring (e.g., isoindole, etc.)	443	Polycyclo ring system having the hetero ring as one of the cyclos
417 Plural chalcogens bonded directly to ring carbons of the five-membered hetero ring (e.g., phthalimide, etc.)	444	Additional hetero ring
418 Chalcogen bonded directly to ring carbon of the five-membered hetero ring	445	Chalcogen bonded directly to ring carbon of the hetero ring
419 C=X bonded directly or indirectly by an acyclic carbon or carbon chain to ring carbon of the five-membered hetero ring (e.g., tryptophan, etc.) (X is chalcogen)	446	Chalcogen bonded directly to ring sulfur by nonionic bonding
420 Indomethacine per se or ester thereof	447	Nitrogen bonded directly to the hetero ring
421 Chalcogen bonded directly to ring carbon of the five-membered hetero ring (e.g., adrenochrome, etc.)	448	C=O bonded directly to the hetero ring (X is chalcogen)
422 Additional hetero ring	449	..Oxygen containing hetero ring
423 C=X bonded directly to the five-membered hetero ring by nonionic bonding (X is chalcogen)	450	...The hetero ring has at least seven members
424 Chalcogen bonded directly to the five-membered hetero ring by nonionic bonding	451	...The hetero ring is six-membered
425 Plural chalcogens bonded directly to the five-membered hetero ring by nonionic bonding	452	Plural ring oxygens in the hetero ring
426 Nitrogen bonded directly to the five-membered hetero ring by nonionic bonding	453	Polycyclo ring system having the hetero ring as one of the cyclos
427 Two double bonds between ring members of the five-membered hetero ring (e.g., pyrrole, etc.)	454	Tricyclo ring system having the hetero ring as one of the cyclos
428 Chalcogen bonded indirectly to the five-membered hetero ring by acyclic nonionic bonding	455	Chalcogen bonded directly to ring carbon of the hetero ring
429 Carbocyclic ring bonded directly to the five-membered hetero ring	456	Bicyclo ring system having the hetero ring as one of the cyclos (e.g., chromones, etc.)
430 ..Sulfur containing hetero ring	457	Coumarins (including hydrogenated)
431 ...The hetero ring has at least seven members	458	Tocopherols (e.g., vitamin E, etc.)
432 ...The hetero ring is six-membered	459	Nitrogen containing
433 Plural hetero atoms in the hetero ring	460	Chalcogen bonded directly to ring carbon of the hetero ring
434 Polycyclo ring system having the hetero ring as one of the cyclos	461	...The hetero ring is five-membered
435 Three or more hetero atoms in the hetero ring	462	Spiro ring system
	463	Plural ring oxygens in the hetero ring
	464	Bicyclo ring system having the hetero ring as one of the cyclos (e.g., methylenedioxyphehyl group, etc.)
	465	The hetero ring is substituted
	466	Nitrogen containing
	467	Only two ring oxygens in the hetero ring which is not a polycyclo ring system (e.g., dioxolane, etc.)
	468	Polycyclo ring system having the hetero ring as one of the cyclos
	469	Bicyclo ring system having the hetero ring as one of the cyclos
	470	Chalcogen or nitrogen bonded directly to the hetero ring
	471	Nitrogen containing
	472	The nitrogen bonded directly to the hetero ring
	473	Chalcogen bonded directly to the hetero ring
	474	Ascorbic acid or derivative (e.g., vitamin C, etc.)
	475	...The hetero ring is three-membered
	476	..N-C(=X)X containing (X is chalcogen) DOAI
	477	..N-C(=X)-X-M containing
	478	..N-C(=X)-X-C containing
	479	...With an additional active ingredient

JUNE 1985

	DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	528	C(=O)N containing
	..N-C(=X)X containing (X is chalcogen) DOAI	529	..Z-C(=O)-O-Y wherein Z is hydrogen or an organic radical bonded to the C(=O) by a carbon and Y is an organic radical bonded to the oxygen by a carbon
480	..N-C(=X)-X-C containing		...Z contains a cyclopentyl or cyclopentene ring
	...Polycyclo ring system attached by nonionic bonding	530	...Z contains a cyclopropyl or cyclopropene ring
481	Naphthyl ring system	531	...Z-C(=O)-O-Y, wherein Z contains a benzene ring
482	...N-C(=X)-N, N-C(=N)N, N-N, nitrogen directly bonded to oxygen by nonionic bonding or cyano containing	532	Compound contains two or more C(=O)O groups indirectly bonded together by only covalent bonds
	...Plural N-C(=X)-X groups	533	Z or Y radical contains a nitrogen atom
483	...Ring in acid moiety		The nitrogen of the Z radical is directly bonded to a benzene ring which is directly bonded to the C(=O) group
484	The ring is a benzene ring	536	With an agent to enhance topical absorption or with a stabilizing agent
485	Phenoxy in acid moiety	537	With an additional active ingredient
486	The benzene ring is attached to nitrogen through an acyclic carbon or carbon chain	538	Nitrogen bonded to carbon in Z moiety
487	Ring in alcohol moiety	539	Plural separated benzene rings in Z moiety
	...Ring in alcohol moiety	540	Nitrogen in Y moiety
489	...Ring attached directly to oxygen of N-C(=O)-O	541	Aldehyde or ketone in Z or Y radical
490	..With an additional active ingredient	542	Z radical contains two or more nitrogen atoms at least one of which forms a C(=X)N group (X is chalcogen)
491	..Heavy metal containing DOAI		Z forms a phenoxy alkyl or phenoxy alkenyl radical
492	..Tin	543	C(=O)O attached directly through the carbon to a benzene ring
493	..Zinc	544	Ketone in Z radical
494	..Gold or silver	545	...ZC(=O)OY, wherein Z is an acyclic radical bonded to the C=O by a carbon and Y is an organic radical bonded to the oxygen by a carbon
495	..Mercury	546	Compound contains two or more C(=O)O groups
496	..Nitrogen containing		Ring is alcohol moiety
497	..Lead	548	Z radical contains carbon to carbon unsaturation
498	..Copper	549	Z radical contains sulfur or halogen
500	..With an additional active ingredient	550	Z radical contains nitrogen
501	..Nickel or cobalt	551	Z contains an unbroken chain of at least seven carbon atoms bonded directly to the C(=O) group
502	..Iron	552	..Radical -XH acid, or anhydride, acid halide or salt thereof (X is chalcogen) DOAI
503	..Antimony or bismuth	553	..Amine addition salt of the acid
504	..Arsenic	554	..Benzene ring in acid moiety
505	..Cadmium or chromium	555	..Inner quaternary ammonium salt (e.g., betaine, etc.)
506	..Ester DOAI	556	..Carboxylic acid, percarboxylic acid, or salt thereof (e.g., peracetic acid, etc.)
507	..N-C(=X)-N-X-C containing (e.g., hydroxamic acid ester, etc.) (N is C or H and X is chalcogen)	557	...Higher fatty acid or salt thereof
	..X-C=N containing (e.g., imidoester, etc.) (X is chalcogen)		Ring containing
508	..(O=N(O)-O)-C containing (e.g., nitrate ester, etc.)		Carbon to carbon unsaturation
509	..Polycyclo ring system		Nitrogen other than as nitro or nitroso nonionically bonded
510	...Two of the cyclos share at least three ring members (i.e., bridged)		Sulfur nonionically bonded
511	..X-C(=X)-X containing (e.g., carbonic acid ester, thiocarbonic acid ester, etc.) (X is chalcogen)		RC(=O)N containing (i.e., carboxamide) (R is C or H)
512	..C-C(=X)-X-C containing (X is chalcogen and at least one X is other than oxygen)		Plural nitrogens nonionically bonded
513	..Carbon bonded to -NCX or -XCN (e.g., cyanate, thiocyanate or isothiocyanate, etc.) (X is chalcogen)		N-N or N=C(N)-N containing (e.g., hydrazines, hydrazones, or guanidines, etc.)
514	...With an additional active ingredient		
515	...Containing plural -NCX or -XCN groups or a cyano		
516	..S-X-C containing (e.g., sulfates, etc.) (X is chalcogen)		
517	...S of S-X-C attached directly to a benzene ring		
518	..Cyano or isocyano bonded directly to carbon		
519	...Benzene ring containing		
520	C=O other than as ketone or aldehyde		
521	The cyano is bonded directly to a benzene ring		
522	Additional nitrogen other than cyano		
523	The cyano is bonded directly to a benzene ring		
524	Two or more of the cyano groups		
525	Acyclic		
526	C=O other than as ketone or aldehyde		
527			

274

BEST COPY AVAILABLE

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)	601	..Sulfonamides (i.e., Q-(O=)S(=O)-N, wherein Q is a substituent and wherein any substituent attached to the nitrogen will be referred to as E)
..Radical -XH acid, or anhydride, acid halide or salt thereof (X is chalcogen) DOAI		...Q contains benzene ring
..Carboxylic acid, percarboxylic acid, or salt thereof (e.g., peracetic acid, etc.)	602	Nitrogen in Q
...Nitrogen other than as nitro or nitroso nonionically bonded	603	Q is monocyclic
....Plural nitrogens nonionically bonded	604	...Q is acyclic and benzene ring in a substituent E
....Polycarboxylic acid	605	..N-S-S containing
....Benzene ring nonionically bonded	606	..N-S-N containing or contains a nitrogen bonded directly to a S=O group (e.g., sulfinamides, etc.)
....Benzene ring nonionically bonded	607	..Sulfur attached directly to amino nitrogen by nonionic bonding (e.g., sulfenamides, etc.)
....Polycyclo ring system	608	..Cyanamides (i.e., compounds containing cyano bonded directly to amino nitrogen)
....Carboxy or salt thereof only attached indirectly to the benzene ring	609	..Nitramines (i.e., compounds containing nitro bonded directly to amino nitrogen)
571 Ether oxygen single bonded to carboxylic acid, percarboxylic acid or salt thereof through an acyclic carbon or acyclic carbon chain	610	..Nitrosamines (i.e., compounds containing nitroso bonded directly to amino nitrogen)
572 ...Cyclic carboxylic acid containing three to five carbons or cyclic percarboxylic acid containing three to five carbons or salt thereof	611	..Haloamines (i.e., compounds containing halogen attached directly to amino nitrogen by nonionic bonding)
573 Cyclopentyl or cyclopentene (e.g., prostaglandins, etc.)	612	..Carboxamides (i.e., R-C(=O)-N, wherein R is a radical having carbon bonded directly to the C(=O)-N or is hydrogen and wherein any substituent attached to nitrogen will be referred to as E)
574 ...Polycarboxylic acid or salt thereof	613	...N-N containing (e.g., aminimine, hydrazine, etc.)
575 ..Hydroxamic acid or salt thereof	614	R contains benzene ring
576 ..Benzene ring containing	615	...Plural carboxamide groups or plural C=O groups bonded directly to the same nitrogen
577 ...Polycyclo ring system	616	...R contains benzene ring
578 ..Acyclic acid or salt thereof	617	Sulfur in R
579 ..Nitrogen containing other than solely as a nitrogen in an inorganic ion of an addition salt, a nitro or a nitroso DOAI	618	Nitrogen in R
580 ..Thioureas (i.e., N-C(=S)-N)	619	The nitrogen in R is an amino nitrogen attached indirectly to a ring by acyclic bonding
581 ...Thiocarbazides or thiosemicarbazides (i.e., N-N-C(=S)-N containing)	620	C=O in R
582 Thiocarbazones or thiosemicarbazones (i.e., C=N-N-C(=S)-N containing)	621	C-O- group in R
583 Benzene ring containing	622	Plural alicyclic rings in R
584 ...C=O, sulfur or cyano attached directly to thiourea nitrogen by nonionic bonding	623	...Three-membered ring in R
585 ...Benzene ring containing	624	...R is acyclic
586 Nitrogen attached indirectly to the -C(=S)-group by nonionic bonding	625	Nitrogen in R
587 Oxygen containing	626	Carbon to carbon unsaturation in R
588 ..Ureas (i.e., N-C(=O)-N)	627	Halogen bonded directly to carbon in R
589 ...Nitro or nitroso bonded directly to amino nitrogen (e.g., nitramine, nitrosamine, nitro-urea, etc.)	628	R is hydrogen or a lower saturated alkyl of less than seven carbons
590 ...Carbazides or semicarbazides (i.e., N-N-C(=O)-N containing)	629	A ring or polycyclo ring system in a substituent E is attached indirectly to the carboxamide nitrogen or to an amino nitrogen in substituent E by acyclic nonionic bonding
591 ...Biurets (i.e., N-C(=O)-N-C(=O)-N)	630	..Amidines (i.e., N=C-N)
592 ...Sulfur attached directly to urea nitrogen by nonionic bonding	631	...Amidino hydrazines or hydrazones (i.e., N-N=C-N or N=C-N-N)
593 Sulfur is part of a substituent which contains additional nitrogen	632	...Amidoximes (i.e., N=C=N-O)
594 ...Additional C=O bonded directly to urea nitrogen	633	...Guanidines (i.e., N=C(-N)-N)
595 ...Benzene ring containing	634	Biguanides (i.e., N=C(-N)-N(-N)=N)
596 Benzene ring bonded directly to urea nitrogen	635	...Polyamidines
597 Benzene ring is part of a substituent which contains nitrogen	636	...Benzene ring containing
598 Benzene ring is part of a substituent which contains oxygen	637	..Nitrogen double bonded directly to carbon
599 ..Thiocarboxamides (i.e., C(=S)-N)	638	...Hydrazones (i.e., C=N-N)
600 ..Sulfamides (i.e., N-(O=)S(=O)-N)	639	...Oximes (i.e., C=N-O-)
	640	

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT	674	Three or more amino nitrogens
CONTAINING (DOAI)	675	..Ketone DOAI
..Nitrogen containing other than solely	676	..Nitrogen containing
as a nitrogen in an inorganic ion of	677	...Bicyclo ring system having a benzene
an addition salt, a nitro or a		ring as one of the cyclos
nitroso DOAI	678	..Benzene ring containing
..Nitrogen double bonded directly to	679	...Plural rings
carbon	680	...Polycyclo ring system
641 ...Aldimines or ketimines which contain	681	Bicyclo
a benzene ring (i.e., RC=N wherein	682	Naphthyl ring system
R is C or H)	683	Alicyclic ring
642 ..Quaternary ammonium containing	684	Five-membered alicyclic ring
643 ...Benzene ring containing	685	C=O bonded directly to benzene ring
644 ..Amine oxides	686	Two benzene rings bonded directly
645 ..Nitroxides, oxyamines or		to the same C=O
hydroxylamines (i.e., N-O or N-OH)	687	Oxygen single bonded to carbon
646 ..Benzene ring containing	688	...C=O bonded directly to benzene ring
647 ...Amino nitrogen and a ring bonded		(e.g., acetophenone, etc.)
directly to the same ring and any	689	Oxygen single bonded to carbon
other amino nitrogen in the	690	..Alicyclic ring containing
compound is bonded directly to one	691	...Plural alicyclic rings
of the rings	692	Camphor or nuclear substituted
648 ...Two aryl rings or aryl ring systems		derivatives thereof
bonded directly to the same acyclic	693	..Aldehyde DOAI
carbon	694	..Formaldehyde
649 ...Amino nitrogen attached to aryl ring	695	...With polycyclo compound
or aryl ring system by an acyclic	696	...With alcohol
carbon or acyclic chain	697	...With nitrogen containing compound
650 The aryl ring or aryl ring system is	698	..With preservative or stabilizer
bonded directly to another ring or	699	..Benzene ring containing
ring system	700	...Polycyclo ring system
651 Ether oxygen is part of the chain	701	...Acyclic carbon to carbon unsaturation
652 Alkanol group only between the	702	..Sulfur containing
amino nitrogen and an ether	703	..Carbon to carbon unsaturation
oxygen which is bonded directly	704	..Nitrogen containing
to the aryl ring or aryl ring	705	..Plural C=O groups
system (i.e., aryloxy alkanol	706	..Sulfur, selenium or tellurium compound
amines)		(e.g., thioalcohols, mercaptans,
653 Hydroxy, bonded directly to carbon,	707	etc.)
attached directly or indirectly to	708	..Persulfide (e.g., R-S-S-R, etc.)
the acyclic carbon or chain by		..Oxygen bonded directly to sulfur
acyclic nonionic bonding (e.g.,	709	(e.g., sulfoxides, etc.)
beta hydroxy phenethylamines,		...Plural oxygens bonded directly to the
etc.)		same sulfur (e.g., sulfones, etc.)
654 The chain consists of two or more	710	Acyclic carbon to carbon
carbons which are unsubstituted or		unsaturation
have acyclic hydrocarbyl	711	Acyclic
substituents only	712	..Thioether
655 The aryl ring or aryl ring system	713	...Acyclic carbon to carbon unsaturation
and amino nitrogen are bonded	714	..Peroxide DOAI
directly to the same acyclic	715	..Ether DOAI
carbon, which carbon additionally	716	..Nitrogen containing
has only hydrogen or acyclic	717	..Benzene ring containing
hydrocarbyl substituents bonded	718	...Plural oxygens
directly thereto	719	Alicyclic ring
656 ...Polycyclo ring system	720	Acyclic carbon to carbon
657 ...Bicyclo ring system		unsaturation
658 ...Two benzene rings bonded directly to	721	Plural benzene rings
the same nitrogen	722	..Acyclic
659 ..Alicyclic ring or ring system and	723	...Plural oxygens
amino nitrogen are attached	724	..C-O-group (e.g., alcohol, alcoholate,
indirectly by an acyclic carbon or		etc.) DOAI
acyclic chain	725	..Vitamin A compound or derivative
660 ..Plural alicyclic rings	726	..Diphenyl-substituted acyclic alcohol
661 ...Polycyclo ring system		or alcoholate
662 Tricyclo ring system	727	..Nitrogen containing
663 ..Acyclic	728	...C of C-O- group is nuclear C of a
664 ...N-N containing (e.g., aminimine,		benzene ring (e.g., phenol,
hydrazine, etc.)		phenolate, etc.)
665 ...Sulfur containing	729	..Alicyclic ring containing
666 ...Aldehyde or ketone containing	730	..Benzene ring containing
667 ...C-O-group containing	731	...C of C-O- group is nuclear C of a
668 Polyether		benzene ring (e.g., phenol,
669 Polyhydroxy		phenolate, etc.)
670 Monoether	732	Polycyclo ring system (e.g.,
671 ...Carbon to carbon unsaturation		naphthols, etc.)
672 ...Halogen bonded directly to carbon	733	Acyclic carbon to carbon
673 ...Plural amino nitrogens		unsaturation

CLASS 514 DRUG, BIO-AFFECTING AND BODY TREATING COMPOSITIONS

JUNE 1985

DESIGNATED ORGANIC ACTIVE INGREDIENT CONTAINING (DOAI)		CROSS-REFERENCE ART COLLECTIONS PERTAINING TO SUBJECT MATTER ONLY IN CLASS 514 (see subclasses 800-975 below)	
.C-O-group (e.g., alcohol, alcoholate, etc.) DOAI		PEPTIDE AND PROTEIN ART COLLECTIONS PERTAINING TO CLASS 514	
..Benzene ring containing		LHRH LIKE	
...C of C-O- group is nuclear C of a benzene ring (e.g., phenol, phenolate, etc.)		COLLAGEN, GELATIN OR DERIVATIVES THEREOF	
734	Two or more separate aryl-O-groups	800	FIBRINOPEPTIDES, BLOOD-COAGULATION FACTORS OR DERIVATIVES
735	Nuclear halogenated	801	KININ OR DERIVATIVES
736	Additional benzene ring containing	802	PHECMYCIN SERIES OR DERIVATIVES
737	Nuclear halogenated	803	ADRENOCORTICOTROPIC HORMONE OR DERIVATIVES
738	..Polyhydroxy	804	SOMATOSTATIN OR DERIVATIVES
739	..Carbon to carbon unsaturated	805	OXYTOXIN, VASOPRESSIN OR DERIVATIVES
740	..Nitrogen containing compound DOAI	806	CALCITONIN OR DERIVATIVES
741	..Benzene ring containing	807	ENKEPHALIN OR ENDORPHIN OR DERIVATIVES
742	..Polynitro	SPECIFICALLY DISCLOSED DISEASE CONDITION AND PHARMACEUTICAL EFFECT FOR PATENTS ISSUED SUBSEQUENT TO JAN 1, 1965	
743	..Halogenated hydrocarbon DOAI	ADDICTION	
744	..Unsaturated aliphatic compound	810	.Alcohol
745	..Alkyne	811	.Narcotic
746	...Plural halogenated hydrocarbon compounds	812	.Tobacco
747	..Carbocyclic	813	ANEMIA
748	...Two benzene rings directly attached to an acyclic hydrocarbon or acyclic halogenated hydrocarbon (e.g., D.D.T., etc.)	814	.Sickle cell
749	Fluorine containing	815	ANESTHETIC, GENERAL
750	With organic ether or -OH containing compound non-DOAI	816	ANESTHETIC, TOPICAL
751	...Benzene ring containing	817	ANESTHETIC, LOCAL
752	Alkyne	818	ANTACID, ORAL
753	Polycyclo ring system	819	.With antilflatulent
754	Plural benzene rings	820	ANTIARRHYTHMIC
755	Polycyclo ring system	821	ANTICOAGULATION
756	Bicyclo	822	ANTIDOTE
757	..Two or more halogenated hydrocarbons	823	ARTERIOSCLEROSIS
758	..Chlorine as only halogen	824	ARTHRITIS
759	..Fluorine as only halogen	825	ASTHMA
760	..Bromine and chlorine as only halogens	826	ASTRINGENT, NONFACIAL
761	..Bromine and fluorine as only halogens	827	.Topical for the skin
762	..Hydrocarbon DOAI	828	BITE OR STING
763	..Carbocyclic	829	.Insect
764	...Benzene ring containing	830	.Animal (nonpoisonous)
765	Polycyclo ring system	831	BLOOD SUBSTITUTE
766	Polycyclo ring system	832	BLOOD PLASMA EXTENDER
767	..With phosphorus containing non-DOAI	833	COAGULANT
768	..With sulfur containing non-DOAI	834	CARIES
769	DESIGNATED INORGANIC NONACTIVE INGREDIENT OR ELEMENTAL MATERIAL OTHER THAN WATER	835	CHELATE
770	..Siliceous or calcareous material (e.g., clay, earth, etc.)	836	CHOLERA
771	..Oxygen gas containing	837	CIRRHOISIS
772	DESIGNATED ORGANIC NONACTIVE INGREDIENT CONTAINING OTHER THAN HYDROCARBON	838	CONTACT LENS TREATMENT
773	..Peptide containing	839	.Chemical sterilizing
774	..Gelatin or derivative	840	CONTRACEPTIVE
775	..Casein (milk protein) or derivative	841	.Non-mammal
776	..Albumin or derivative	842	.Female (mammal)
777	..Carbohydrate or lignin, or derivative	843	COSMETIC, FACIAL
778	..Starch or derivative	844	.Liquid make-up
779	..Algin or derivative	845	.Cleansing cream or lotion
780	..Locust bean gum	846	.Facial moisturizer
781	..Cellulose or derivative	847	.Facial astringent
782	..Natural gum or resin	848	COUGH AND COLD PREPARATION
783	..Plant extract or plant material of undetermined constitution	849	.Antitussive
784	..Carboxylic acid or salt thereof	850	CYSTIC FIBROSIS
785	..Carboxylic acid ester	851	DANDRUFF
786	..Glyceride	852	DECONGESTANT
787	..Beeswax	853	.Vasoconstrictor
788	..Nitrogen containing	854	.Expectorant
789	MISCELLANEOUS (e.g., HYDROCARBONS, etc.)	855	DERMATITIS
		858	.Athlete's foot
		859	.Acne
		860	.Cellulitis

JUNE 1985

861	DERMATITIS		
862	.Eczema		ART COLLECTIONS 936-975 EXCLUDE
863	.Poison (ivy, oak, sumac)		PRE 1965 PATENTS ISSUED FROM CLASS 260 AND
864	.Psoriasis		530 SERIES CLASSES.
865	.Seborrhea		
866	.Diaper rash		LIQUID CARRIER, DILUENT OR SOLVENT
867	DIABETES		
868	DIARRHEA		ART COLLECTIONS 936-975 EXCLUDE PRE
869	DISTEMPER		1965 PATENTS ISSUED FROM CLASS 260 AND
870	DIURETIC		the CLASS 532-570 SERIES AND CLASS 585
871	EDEMA		
872	.Topical	936	DMSO CONTAINING
873	EMESIS (motion sickness-nausea)	937	DISPERSION OR EMULSION
874	EMOLLIENT	938	.Oil-water type
875	ESTROGENIC AGENT (noncontraceptive)	939	..Mineral oil-water type
876	FLEA CONTROL	940	...Quick break type
877	.Collar type	941	...Polyoxyalkylated compound containing
878	GALLSTONE	942	...Organic sulfonate, sulfate or sulfite
879	GERIATRICS		containing
880	.Senility	943	...Higher fatty acid or derivative
881	HAIR TREATMENT (therapeutic-scalp)		containing
882	.Shampoo	944	GEL
883	HEMORRHOID PREPARATION	945	FOAM
884	HODGKIN'S DISEASE	946	PENETRANT OR ABSORBENT (ENHANCES
885	HYPOGLYCEMIA		PENETRATION INTO SUBJECT TREATED)
886	IMMUNE RESPONSE AFFECTING DRUG	947	.Topical application
887	INFLAMMATION, SKIN		SOLID CARRIER OR SOLID DILUENT
888	.Topical Treatment	948	SOLID CANDY TYPE
889	INFLUENZA	949	NATURALLY DERIVED CLAY (E.G., BENTONITE,
890	INTERFERON INDUCER		ETC.)
891	IRRITANT (e.g., tear gas, etc.)	950	MACROMOLECULAR (OTHER THAN SYNTHETIC
892	KIDNEY STONE		RESINS)
893	LAXATIVE	951	POWDERS, GRANULES OR PARTICLES OF
894	LIVER DISORDER		SPECIFIED MESH OR PARTICLE SIZE
895	.Hepatitis	952	.Wettable
896	MALARIA	953	SHAPED FORMS ADAPTED FOR NONINGESTIBLE
897	MEASLES		USE OTHER THAN SUPPOSITORY TYPE (E.G.,
898	.Rubella		FILMS, INSERTS, ETC.)
899	MENINGITIS	954	.Ocular
900	MENSTRUAL DISORDER	955	..Biodegradable type
901	MOUTH TREATMENT	956	.Aural or otic (i.e., ear)
902	.Periodontitis		GASEOUS OR GAS EMITTING CARRIER OR
903	.Mouthwash		PROPELLANT
904	.Gingival	957	VAPOR EMITTING COMPOSITION
905	MULTIPLE SCLEROSIS	958	FOR SMOKING OR INHALING
906	MULTIPLE VITAMINS	959	BREATHING GASES
907	.With mineral		PILL, LOZENGE, TABLET OR CAPSULE
908	MUSCLE RELAXANT	960	SIGNIFICANT, TABLET FORMULATION (E.G.,
909	MUSCULAR DYSTROPHY		DESIGNATED EXCIPIENT, DISINTEGRANT,
910	LEUKEMIA		GLYDENT OR LUBRICANT, ETC.)
911	OBESITY	961	.Binder therefor
912	.Anorectic	962	CAPSULE (E.G., GELATIN, ETC.)
913	.Bulking agent	963	.Microcapsule-sustained or differential
914	OPHTHALMIC		release
915	.Glaucoma	964	SUSTAINED OR DIFFERENTIAL RELEASE TYPE
916	.Inflammation	965	.Discrete particles in supporting matrix
917	.Wetting agent		SUPPOSITORY, BOUGIE OR BASE
918	PYRETIC	966	RECTAL
919	RADIOACTIVE, ANTI-	967	VAGINAL
920	REPELLENT	968	URETHRAL
921	.Insect	969	OINTMENT OR SALVE BASE
922	.Mammal		SPECIAL DESIGNATED INGREDIENT
923	SHOCK		CONTAINING DESIGNATED INGREDIENT TO
924	SIDE EFFECT REDUCTION BY INCORPORATION	970	STABILIZE AN ACTIVE INGREDIENT
925	OF A SECOND DESIGNATED INGREDIENT	971	.Crystallization point depressant or
926	SLEEP AID (Insomnia)		cold stabilizer containing
927	TUBERCULOSIS	972	.Ultraviolet light stabilizer containing
928	ULCER TREATMENT	973	.Sulfur compound additive as stabilizer
929	.Duodenal		(e.g., sulfites, etc.)
930	.Peptic	974	CONTAINING DESIGNATED INGREDIENT TO
931	.Topical		REDUCE NOXIOUS EFFECTS OF ACTIVE
932	VASODILATOR		INGREDIENT (E.G., TASTE MASKING, ODOR
933	VASOCONSTRICTOR (nondecongestant)		REDUCING, ETC.)
934	VENERAL DISEASE	975	CHARACTERIZED BY THE DESIGNATED
935	.Gonorrhea		SURFACTANT USED
	.Syphilis		
	.Virus		
	UTERINE MOTILITY		

JUNE 1985

IN THIS SERIES OF CLASSES, CLASS 534 IS TO BE CONSIDERED AS AN INTEGRAL PART OF CLASS 260 AND FOLLOWS THE SCHEDULE HIERARCHY, RETAINING ALL PERTINENT DEFINITIONS AND CLASS LINES OF CLASS 260.

	ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	583	..Formation of azo group by coupling diazonium compound with coupling component in presence of ammonia, a Group IIA light metal hydroxide or a Group IA or IIA light metal phosphate
7	..Noble gas containing (i.e., He, Ne, Ar, Kr, Xe, or Rn containing)		
10	..RADIOACTIVE METAL CONTAINING (At. No. 43, 61 or 84+; or radioactive isotope of another metal)	584	..Formation of azo group by coupling diazonium compound with coupling component in other than stoichiometric proportions
11	..Actinide series metal (At. No. 89+)		
12	...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl containing, etc.)	585	..Formation of azo group by reduction of nitro group
13	The -C(=X)- is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens	586	..Formation of azo group from group having nitrogen single bonded to nitrogen
14	..Technetium containing (At. No. 43; Tc)		
15	..RARE EARTH METAL CONTAINING (At. No. 21, 39, 57-60 or 62-71)	587	..Formation of azo group directly from nitrogen containing compound by process other than diazotization and coupling
16	..Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens		
550	..Diazoamino (e.g., triazenes, etc.)	588	..Process utilizing azo compound as reactant
551	..Hetero ring containing		
552	..Chalcogen or additional nitrogen bonded directly to the diazoamino group	589	...Formation of quaternary ammonium or hydrazinium group
553	..Noncarbon atom double or triple bonded and the diazoamino group bonded directly to the same acyclic carbon	590	...Ring formation
554	..Plural benzene rings bonded directly to the diazoamino group	591	...Formation of -C(=X)HNNH group, wherein X is chalcogen (substitution may be made for hydrogen only)
555	..Processes	592	...Formation of sulfonamide group
556	..Diazo oxide or diazotate (e.g., -N=N-O-, etc.)	593	...Additional reactant containing phosphorus or sulfur
557	..Sulfur attached directly to a ring by nonionic bonding	594	Sulfonic acid group formed or added to the azo reactant (-O=S(=O)-OH, wherein H of -OH may be replaced by a substituted or unsubstituted ammonium ion or metal)
558	..Diazo or diazonium (e.g., -N=N-C, etc.)		
559	..With preservative or stabilizer		
560	..Hetero ring containing	595	...Formation of -C(=X)X- ester group, wherein the X's may be the same or diverse chalcogens
561	..Plural diazo or diazonium groups		
562	..Heavy metal or aluminum containing	596	...Etherification of hydroxy group
563	..Polycyclo ring system having at least three cyclos	597	...Replacement of halogen by cyano group
564	..Aldehyde or ketone group containing	598	...Replacement of halogen by amino nitrogen
565	..Formation of diazonium group		
566	..Azoxy	599	...Hydrolysis
567	..Hetero ring containing	600	...Reduction of nitro or nitrogen oxide group
568	..Azodioxy		
569	..Heavy metal or aluminum containing	601	...Nitration
570	..Sulfonic acid group containing (-O=S(=O)-OH, wherein H of -OH may be replaced by a substituted or unsubstituted ammonium ion or metal)	602	...Metallization of the azo reactant in presence of an additional organic compound
571	...Stilbene containing	603	..Quaternary ammonium or hydrazinium attached indirectly to an azo group by nonionic bonding
572	..Formation of azoxy group		
573	..Azo	604	...Hetero ring containing
574	..Quaternary azo group containing	605	The pentavalent nitrogen is a ring member
575	..Specified crystalline form		
576	..With preservative or stabilizer	606	Azo bonded directly to a hetero ring or to a polycyclo ring system having a hetero ring as one of the cyclos
577	..Liquid crystal (e.g., pleochroic, etc.)		
578	..Formation of azo group by oxidative coupling	607	The hetero ring contains the pentavalent nitrogen
579	..Formation of azo group by simultaneous diazotization and coupling	608	Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
580	..Formation of azo group from diazoamino group		
581	..Formation of azo group by coupling diazonium compound with coupling component in presence of an additional organic compound	609	Acyclic carbon bonded directly to the azo group
582	..Formation of azo group by coupling diazonium compound with coupling component at a specified pH range	610	Additional hetero ring or polycyclo ring system having a hetero ring as one of the cyclos bonded directly to the azo group

JUNE 1985

- ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)
- .Azo
 - ..Quaternary ammonium or hydrazinium attached indirectly to an azo group by nonionic bonding
 - ...Hetero ring containing
 - The pentavalent nitrogen is a ring member
 - Azo bonded directly to a hetero ring or to a polycyclo ring system having a hetero ring as one of the cyclos
 - The hetero ring contains the pentavalent nitrogen
 - 611 The hetero ring is one of the cyclos in a polycyclo ring system
 - 612 Acyclic $-C(=X)-$, wherein X is chalcogen, attached directly or indirectly to the hetero ring by nonionic bonding
 - 613 ...Heavy metal or aluminum containing
 - 614 ...Plural azo groups attached indirectly to each other by nonionic bonding
 - 615 ...Plural nitrogens bonded directly to the same alkylene chain (e.g., diamino alkylene, etc.)
 - 616 ..Nitrogen oxide, other than as nitro or nitroso, containing
 - 617 ..Fiber- or substrate-reactive azo compound
 - 618 ...Formazan containing (i.e., $HNH-N=CH-N=NH$, wherein substitution may be made for hydrogen only)
 - 619 ...Heavy metal or aluminum containing
 - 620 Halogen attached directly to a hetero ring or to an alicyclic ring by nonionic bonding
 - 621 Stilbene containing
 - 622 The hetero ring is six-membered and contains at least two nitrogens
 - 623 Diverse azo moieties bonded to the same metal
 - 624 At least two such hetero rings attached indirectly to each other by nonionic bonding
 - 625 Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
 - 626 Chalcogen or carbon bonded directly to the six-membered hetero ring and is between the hetero ring and the azo group
 - 627 Plural halogens attached directly to the hetero ring by nonionic bonding
 - 628 Diverse hetero ring containing
 - 629 Alkylene, alkenyl or alkenylene bonded directly to sulfonyl or sulfonamide, which sulfonyl or sulfonamide is between a ring and the alkylene, alkenyl or alkenylene
 - 630 ...Halogen attached directly to a hetero ring or to an alicyclic ring by nonionic bonding
 - 631 Stilbene containing
 - 632 The hetero ring is six-membered and contains at least two nitrogens
 - 633 Polycyclo ring system having the hetero ring as one of the cyclos
 - 634 At least two such hetero rings attached indirectly to each other by nonionic bonding
 - 635 Additional hetero ring containing
 - 636 Pyrazole containing (including hydrogenated)
 - 637 Plural azo groups attached indirectly to each other by nonionic bonding
 - 638 The hetero ring and benzene ring, to which an azo group is bonded directly, bonded directly to the same nitrogen
 - 639 ...Aziridine containing (including unsaturated)
 - 640 ...Alkylene, alkenyl, alkenylene, alkynyl or alkynylene attached directly or indirectly to a ring by nonionic bonding
 - 641 Alkylene, alkenyl or alkenylene bonded directly to sulfonyl or sulfonamido, which sulfonyl or sulfonamido is between a ring and the alkylene, alkenyl or alkenylene
 - 642 The alkylene, alkenyl or alkenylene and the ring are both bonded directly to the same sulfonyl group
 - 643 Alkylene, alkenyl or alkenylene bonded directly to carboxamido, urea or $-C(=X)-$, wherein X is chalcogen, which group is between a ring and the alkylene, alkenyl or alkenylene
 - 644 Alkylene, alkenyl or alkenylene and a ring bonded directly to the same chalcogen or to plural chalcogens which are bonded directly to each other
 - 645 ..Plural sulfonyl groups bonded directly to same amino nitrogen (e.g., sulfonylamino-sulfonyl, etc.)
 - 646 ..Sulfonyl and carbonyl bonded directly to the same amino nitrogen (e.g., sulfonylamino-carbonyl, etc.)
 - 647 ..Plural amino nitrogens bonded directly to the same sulfonyl (e.g., aminosulfonylamino, etc.)
 - 648 ..Alkyl, having at least eight carbons specified, or plural alkyl chains, each having at least five carbons specified, bonded directly to a ring, which ring is attached directly or indirectly to an acyclic carbon chain, which chain is bonded directly to a urea or carboxamide nitrogen that is between the chain and an additional ring
 - 649 ..Alkyl chain having at least eight carbons specified bonded directly to a ring
 - 650 ..Sulfonyl or $-C(=X)-$, wherein X is chalcogen, between a ring and an alkyl chain having at least eight carbons specified
 - 651 ...The sulfonyl or $-C(=X)-$ is bonded directly to the ring
 - 652 ..Formazan containing (i.e., $HNH-N=CH-N=NH$, wherein substitution may be made for hydrogen only)
 - 653 ..Polycyclo carbocyclic ring system having at least three cyclos
 - 654 ...The polycyclo ring system consists of three six-membered cyclos and has plural oxygens bonded directly thereto
 - 655 Hetero ring containing
 - 656 At least two such ring systems having plural oxygens bonded directly thereto
 - 657 ...The polycyclo ring system has no azo group bonded directly thereto

L80

BEST COPY AVAILABLE

JUNE 1985

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	680	Exactly three azo groups attached indirectly to each other by nonionic bonding
..Azo		
..Polycyclo carbocyclic ring system having at least three cyclos	681	...Sulfonic acid group containing $(-O=S(=O)-OH)$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)
658 ...Chalcogen double bonded directly to the polycyclo ring system		
659 ..Bicyclo carbocyclic ring system consisting of a six-membered ring and a five-membered ring (e.g., indane, etc.)	682	..Plural hydroxy groups or esters thereof bonded directly to a monocyclic benzene ring (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or metal)
660 ..Hydroxy and carbonyl of $-COO-$ bonded directly to a monocyclic benzene ring (H or hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a metal)	683	...Azo bonded directly to the benzene ring
661 ...Heavy metal or aluminum containing	684	Heavy metal or aluminum containing
662 Hetero ring containing	685	At least three azo groups attached indirectly to each other by nonionic bonding
663 Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding	686	Hetero ring containing
664 ...Hetero ring containing	687	Plural monocyclic benzene rings, each having plural hydroxy groups or esters thereof bonded directly thereto
665 Azo bonded directly to the hetero ring or to a polycyclo ring system which contains the hetero ring as one of the cyclos	688	Two azo groups attached indirectly to each other by nonionic bonding
666 ...At least three azo groups attached indirectly to each other by nonionic bonding	689	..Stilbene containing
667 Plural monocyclic benzene rings, each having hydroxy and carbonyl of $-COO-$ bonded directly thereto	690	...Heavy metal or aluminum containing
668 Additional monocyclic benzene ring having plural hydroxy groups, hydroxy and nitrogen, or plural nitrogens bonded directly thereto, wherein the nitrogen is other than as nitro, nitroso or azo	691	...Hetero ring containing
	692	..Heavy metal or aluminum containing
	693	...Amine salt
	694	...Arsenic containing
669 Additional $-C(X)-$, wherein X is chalcogen	695	...Azo moiety and moiety which contains acyclic $-CH=N-$ group bonded to the same metal
670 ...Two azo groups attached indirectly to each other by nonionic bonding	696	...Diverse azo moieties bonded to the same metal
671 Sulfonic acid group containing $(-O=S(=O)-OH)$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)	697	Hetero ring containing
672 Plural monocyclic benzene rings, each having hydroxy and carbonyl of $-COO-$ bonded directly thereto	698	Hetero ring in each azo moiety
673 Additional $-C(X)-$, wherein X is chalcogen	699	Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
674 ...Sulfonic acid group containing $(-O=S(=O)-OH)$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)	700	...Azo bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom
675 Azo attached indirectly to the monocyclic benzene ring by nonionic bonding	701	...Hetero ring containing
676 ..Plural $-HNNH$ groups or $-OH$ and $-HNNH$ bonded directly to a monocyclic benzene ring (H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)	702	Polycyclo ring system containing the hetero ring as one of the cyclos
677 ...Plural azo groups in the same azo moiety attached indirectly to each other by nonionic bonding	703	Azo bonded directly to the polycyclo ring system
678 Sulfonic acid group containing $(-O=S(=O)-OH)$, wherein H of $-OH$ may be replaced by a substituted or unsubstituted ammonium ion or metal)	704	The azo group is attached indirectly in the same azo moiety to an additional azo group or to an acyclic chain which contains a $-CH=N-$ group by nonionic bonding
679 Plural monocyclic benzene rings, each having $-OH$ and $-HNNH$ or plural $-HNNH$ groups bonded directly thereto	705	Plural ring nitrogens in the polycyclo ring system
	706	Quinoline or isoquinoline containing (including hydrogenated)
	707	Azo bonded directly to the hetero ring
	708	At least three azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
	709	Two azo groups in the same azo moiety attached indirectly to each other by nonionic bonding
	710	Pyrazole (including hydrogenated)
	711	Sulfonyl bonded directly to a ring
	712	Additional chalcogen bonded directly to the sulfonyl
	713	...Benzene ring containing

JUNE 1985

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	740	...Hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
..Azo		
...Heavy metal or aluminum containing		
...Benzene ring containing	741	...Hetero ring attached indirectly to an azo group by nonionic bonding
714 At least three azo groups in the same azo moiety attached indirectly to each other by nonionic bonding	742	The acyclic carbon, to which the other two acyclic carbons are bonded, is between the hetero ring and the azo group
715 Plural monocyclic benzene rings attached directly to each other by nonionic bonding and are between azo groups	743	...At least three azo groups attached indirectly to each other by nonionic bonding
716 Two azo groups in the same azo moiety attached indirectly to each other by nonionic bonding	744	...Two azo groups attached indirectly to each other by nonionic bonding
717 Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)	745	Each azo group is bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom
718 Plural monocyclic benzene rings attached directly or indirectly to each other by acyclic nonionic bonding and are between the azo groups	746	Plural benzene rings bonded directly to each other and are between the azo groups
719 Plural monocyclic benzene rings attached directly or indirectly to each other by acyclic nonionic bonding and are between the azo groups	747	Each benzene ring is bonded directly to an azo group
720 Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)	748	Plural amino nitrogens bonded directly to a benzene ring which is between the azo groups
721 Nitrogen bonded directly to the -C(=X)- group (e.g., carboxamide, etc.)	749	...Sulfonyl bonded directly to nitrogen
722 Plural bicyclo carbocyclic ring systems bonded directly to the azo group	750	...Having -C(=X)-, wherein X is chalcogen, attached indirectly by nonionic bonding to the acyclic carbon to which the other two acyclic carbons are bonded
723 Sulfonyl bonded directly to amino nitrogen (e.g., sulfonamide, etc.)	751	..Hetero ring containing
724 Sulfonic acid group containing (-O(=S)=O)-OH, wherein H of -OH may be replaced by the ammonium ion or a metal)	752	...Polycyclo ring system having a hetero atom shared by at least two rings or at least two hetero atoms which are not members of the same ring
725 Amino nitrogen containing	753	...Azo bonded directly to the hetero ring or to a polycyclo ring system which contains the hetero ring as one of the cyclos
726 ..Boron or silicon containing	754	At least three azo groups attached indirectly to each other by nonionic bonding
727 ..Phosphorus attached indirectly to an azo group by nonionic bonding	755	Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
728 ..Amine salt		
729 ..Chain containing at least fifteen alkylene oxide groups	756	Two azo groups attached indirectly to each other by nonionic bonding
730 ..Sulfonic acid ester group containing	757	Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to an azo group
731 ...Hetero ring containing	758	Both hetero rings or polycyclo ring systems are between the azo groups
732 ..Nitrogen, other than as azo, and chalcogen or -C(=X)- bonded directly to a -C(=X)- group, wherein the X's may be the same or diverse chalcogens (e.g., carbamic, allophanic, etc.)	759	Plural monocyclic benzene rings, each bonded directly to an azo group, are between the azo groups
733 ...Hetero ring containing	760	The benzene rings are bonded directly to each other
734 ..Halogen bonded directly to sulfur or to a -C(=X)- group, wherein X is chalcogen	761	Both azo groups are bonded directly to the hetero ring or to the polycyclo ring system
735 ..Containing acyclic -XCX or -NCX, wherein X is chalcogen (e.g., thiocyanato, isocyanato, etc.)	762	Polycyclo ring system having at least three cyclos, at least one of which is a hetero ring
736 ..Thiosulfuric acid group containing (-S-(O(=S)=O)-OH, wherein H of the -OH may be replaced by the ammonium ion or Group IA or IIA light metal)	763	Bicyclo carbocyclic ring system
737 ..Cyano and carbon bonded directly to acyclic nitrogen	764	Additional ring bonded directly to the hetero ring or to the polycyclo ring system
738 ..Acyclic chain which contains -CH=N- (substitution may be made for hydrogen only)		
739 ..Azo bonded directly to an acyclic carbon which is bonded directly to two acyclic carbons, each of which is double or triple bonded to an atom		

JUNE 1985

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	784	Plural sulfonic acid groups
..Azo	785	Containing acyclic -C(=X)-, wherein X is chalcogen
..Hetero ring containing	786	The -C(=X)- is bonded directly to nitrogen
...Azo bonded directly to the hetero ring or to a polycyclo ring system which contains the hetero ring as one of the cyclos	787	The hetero ring is one of the cyclos in a polycyclo ring system
765 Additional hetero ring or polycyclo ring system which contains a hetero ring as one of the cyclos bonded directly to the azo group	788	The hetero ring consists of sulfur, nitrogen and carbon (e.g., benzothiazole, etc.)
766 The hetero ring is six-membered and contains nitrogen (e.g., pyridine, etc.)	789	Chalcogen double bonded directly to the hetero ring
767 The hetero ring contains at least two nitrogens (e.g., pyrimidine, etc.)	790	The hetero ring is five-membered and consists of one nitrogen and four carbons (e.g., indole, etc.)
768 The hetero ring is in a bicyclo ring system (e.g., quinoline, benzomorpholine, etc.)	791	Carbocyclic ring bonded directly to the hetero ring or to the polycyclo ring system which contains the hetero ring
769 Pyrazole (including hydrogenated)	792	Pyrazole containing (including hydrogenated)
770 The hetero ring is six-membered and consists of one nitrogen and five carbons (e.g., pyridine, etc.)	793	Sulfonyl containing
771 Acyclic oxygen bonded directly to the hetero ring	794	Carbocyclic ring attached indirectly to the azo group by nonionic bonding
772 Plural acyclic chalcogens bonded directly to the hetero ring at the two positions adjacent to the ring nitrogen	795	The hetero ring is five-membered and contains at least one atom each of sulfur, nitrogen and carbon
773 Plural acyclic nitrogens, other than as nitro, nitroso or azo, bonded directly to the hetero ring at the two positions adjacent to the ring nitrogen	796	...At least three azo groups attached indirectly to each other by nonionic bonding
774 Additional hetero ring attached indirectly to the azo group by nonionic bonding	797	...Two azo groups attached indirectly to each other by nonionic bonding
775 The additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos is bonded directly to a ring, which ring is between the azo group and the additional hetero ring	798	...Plural carbocyclic rings bonded directly to the azo group
776 A ring and the additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos are bonded directly to the same nitrogen	799	The hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos is bonded directly to one of the carbocyclic rings or to a bicyclo ring system which contains the carbocyclic ring as one of the cyclos
777 The additional hetero ring or a polycyclo ring system which contains the additional hetero ring as one of the cyclos is bonded directly to an alkylene chain, which chain is between the azo group and the additional hetero ring	800	The hetero ring is one of the cyclos in a polycyclo ring system
778 Bicyclo carbocyclic ring system bonded directly to the azo group	801	The carbocyclic ring or a bicyclo ring system which contains the carbocyclic ring as one of the cyclos and the hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos are bonded directly to the same carboxamide group
779 The bicyclo carbocyclic ring system is between the azo group and an additional carbocyclic ring	802	The carbocyclic ring or a bicyclo ring system which contains the carbocyclic ring as one of the cyclos and the hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos are bonded directly to the same nitrogen atom
780 Sulfonic acid group containing (-O=S(=O)-OH, wherein H of the -OH may be replaced by the ammonium ion or Group IA or IIA light metal)	803	The hetero ring is six-membered and contains at least two nitrogens
781 Sulfonic acid group containing (-O=S(=O)-OH, wherein H of the -OH may be replaced by the ammonium ion or a Group IA or IIA light metal)	804	The hetero ring or a polycyclo ring system which contains the hetero ring as one of the cyclos is bonded directly to an alkylene chain, which chain is between the hetero ring and the carbocyclic ring
782 The hetero ring is one of the cyclos in a polycyclo ring system	805	..Exactly five or exactly six azo groups attached indirectly to each other by nonionic bonding
783 Additional sulfonyl containing	806	..Exactly four azo groups attached indirectly to each other by nonionic bonding

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	829	...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)
.Azo	830	Hydroxy and the -C(=X)- are bonded directly to the same bicyclo ring system (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
807 ...Exactly four azo groups attached indirectly to each other by nonionic bonding		...Plural benzene rings bonded directly to each azo group
808 ...Plural nitrogens bonded directly to the same -C(=X)- group, wherein X is chalcogen (e.g., urea, thiourea, etc.)	831	At least one of the benzene rings is part of a bicyclo ring system
809 ...Benzidine containing	832	Each of the benzene rings is part of a bicyclo ring system
810 ...Exactly three azo groups attached indirectly to each other by nonionic bonding	833	Hydroxy bonded directly to the bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
811 ...Containing -C(=X)-, wherein X, is chalcogen or nitrogen (e.g., carbonyl, etc.)	834	Plural bicyclo ring systems, each having hydroxy bonded directly thereto
812 Nitrogen single bonded directly to the -C(=X)- group (e.g., carboxamide, guanyl, etc.)	835	Additional hydroxy or nitrogen, other than as nitro, nitroso or azo, bonded directly to the bicyclo ring system
813 Plural -C(=X)- groups containing	836	Sulfonic acid group bonded directly to the bicyclo ring system (-O=S(=O)-OH, wherein H of the -OH may be replaced by the ammonium ion or a Group IA or IIA light metal)
814 ...Benzidine containing	837	..Exactly one azo group containing or azo attached indirectly to an additional azo group by ionic bonding
815 ...Hydroxy and nitrogen, other than as nitro, nitroso or azo, bonded directly to the same bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)	838	839 ...Plural benzene rings bonded directly to the azo group
816 ...Exactly two azo groups attached indirectly to each other by nonionic bonding	840	Each of the benzene rings is part of a bicyclo ring system
817 ...Plural benzene rings bonded directly to the same urea or thiourea group and are between the azo groups	841	Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)
818 Bicyclo ring system containing	842	Hydroxy bonded directly at the 2-position of the bicyclo ring system (H of hydroxy may be replaced by the ammonium ion or a Group IA or IIA light metal)
819 ...Plural benzene rings bonded directly to the same carboxamide or sulfonamide group and are between the azo groups	843	Each of the benzene rings is monocyclic
820 Plural carboxamide groups between the azo groups	844	Sulfonyl containing
821 ...Plural benzene rings bonded directly to the same chalcogen or -C(=X)- group, wherein X is chalcogen, and are between the azo groups	845	Oxygen bonded directly to the sulfonyl group (e.g., sulfonic acid, etc.)
822 ...Plural benzene rings bonded directly to each other and are between the azo groups	846	Plural oxygens bonded directly to the sulfonyl group (e.g., sulfuric acid, etc.)
823 Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)	847	The sulfonyl is part of a sulfonamide group (-O=S(=O)HNNH, wherein substitution may be made for hydrogen only)
824 Nitrogen, other than as nitro, nitroso or azo, attached indirectly to azo by nonionic bonding	848	Containing -C(=X)-, wherein X is chalcogen
825 Plural nitrogens, other than as nitro, nitroso or azo, attached indirectly to azo by nonionic bonding	849	The -C(=X)- is bonded directly to nitrogen, which nitrogen is bonded directly to a ring
826 Plural sulfonic acid groups bonded directly to the same bicyclo ring system (-O=S(=O)-OH, wherein H of the -OH may be replaced by the ammonium ion or a Group IA or IIA light metal)	850	Containing -C(=X)-, wherein X is chalcogen
827 ...Hydroxy bonded directly to a bicyclo ring system which is between the azo groups (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)	751	The -C(=X)- is bonded directly to one of the benzene rings
828 Plural bicyclo ring systems, each having hydroxy bonded directly thereto	852	The -C(=X)- is in a -C(=X)X- group, wherein the X's may be the same or diverse chalcogens
	853	The -C(=X)X- is in a -COOH group (H of OH may be replaced by the ammonium ion or a Group IA or IIA light metal)

284

JUNE 1985

ORGANIC COMPOUNDS (CLASS 532, SUBCLASS 1)	875	Nitrogen, other than as nitro or nitroso, attached indirectly to the azo group by nonionic bonding
..Azo		Oxygen bonded directly to carbon
..Exactly one azo group containing or azo attached indirectly to an additional azo group by ionic bonding	876 877	The nitrogen and the oxygen are bonded directly to the same bicyclo ring system
...Plural benzene rings bonded directly to the azo group	878	Sulfonyl bonded directly to the bicyclo ring system
....Each of the benzene rings is monocyclic	879	Plural sulfonyl groups or plural nitrogens bonded directly to the bicyclo ring system
.....Containing -C(=X)-, wherein X is chalcogen	880	Additional sulfonyl which is attached indirectly to the bicyclo ring system by nonionic bonding
.....The -C(=X)- is in a -C(=X)X- group, wherein the X's may be the same or diverse chalcogens		Sulfonyl and the nitrogen bonded directly to the same bicyclo ring system
854 Additional -C(=X)- bonded directly to nitrogen, which nitrogen is bonded directly to a ring	881 882	Oxygen double bonded directly to sulfur
855 Chalcogen, having no direct bond to a ring, attached directly by a single bond to acyclic carbon	883	Sulfonyl bonded directly to a bicyclo ring system
856 Nitrogen, other than as nitro or nitroso, attached indirectly to the azo group by nonionic bonding	884	Plural sulfonyl groups bonded directly to the same bicyclo ring system
857 Hydroxy bonded directly to acyclic carbon or carbon chain (H of hydroxy may be replaced by the ammonium ion or Group IA or IIA light metal)	885	...Benzene ring bonded directly to the azo group
858 Plural chalcogens bonded directly to the acyclic carbon or carbon chain	886 887	...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl, etc.)
859 Chalcogen bonded directly to a ring		..Purification or recovery
860 Acyclic -C(=X)- containing, wherein X is chalcogen (e.g., carbonyl, etc.)		
861 Hydroxy bonded directly to a bicyclo ring system (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)		
862 Nitrogen bonded directly to the -C(=X)- group (e.g., carboxamide, etc.)		
863 The -C(=X)- is bonded directly to the bicyclo ring system		
864 Sulfonyl containing		
865 Additional acyclic -C(=X)- group		
866 Additional nitrogen bonded directly to the additional -C(=X)- group		
867 At least three -C(=X)HNNH groups, wherein substitution may be made for hydrogen only		
868 Additional amino nitrogen		
869 Plural oxygens bonded directly to the same monocyclic benzene ring		
870 Halogen, acyclic carbon, the azo group and an additional halogen or acyclic carbon, all bonded directly to the same benzene ring		
871 Acyclic carbon, carboxamide and chalcogen or an additional acyclic carbon, all bonded directly to the same benzene ring		
872 The nitrogen is additionally bonded directly to the bicyclo ring system		
873 Additional acyclic -C(=X)- group		
874 The -C(=X)- is bonded directly to the bicyclo ring system		

285

JUNE 1985

IN THIS SERIES OF CLASSES, CLASS 556 IS TO BE CONSIDERED AS AN INTEGRAL PART OF CLASS 260 (AFTER SUBCLASS 448C) AND FOLLOWS THE SCHEDULE HIERARCHY RETAINING ALL PERTINENT DEFINITIONS AND CLASS LINES OF CLASS 260.

	ORGANIC COMPOUNDS (Class 532, Subclass 1)	31	...Containing -C(=X)-, wherein X is chalcogen (e.g., carbonyl containing, etc.)
1	..HEAVY METAL CONTAINING (e.g., Ga, In or Tl, etc.)	32	..Nitrogen double bonded directly to carbon
2	..With preservative or stabilizer	33	...Carbocyclic ring bonded directly to the nitrogen (e.g., azomethines, etc.)
3	...Compound preserved or stabilized contains lead bonded directly to carbon	34	Additional carbon double bonded to nitrogen (e.g., bisazomethines, etc.)
4	Halogen containing preservative or stabilizer	35	...Additional nitrogen bonded directly to the carbon or nitrogen
5	Chalcogen containing preservative or stabilizer	36	Guanidines
6	...Nitrogen containing preservative or stabilizer	37	...Chalcogen bonded directly to the carbon or nitrogen (e.g., oximes, etc.)
7	..Boron containing	38	..Nitrogen and plural sulfurs bonded directly to the same carbon (e.g., thiocarbamates, etc.)
8	..Hydrogen bonded directly to the boron	39	...Plural nitrogens bonded directly to the same carbon or attached to each other by a chain consisting of carbons, which carbons may be part of a ring (e.g., ethylene bis-dithiocarbamates, etc.)
9	..Silicon containing	40	..Plural -C(=X)- groups, wherein X is chalcogen, bonded directly to the same non-benzenoid carbons, or the enolate thereof. (e.g., beta-diketone chelates, acetylacetonates, etc.)
10	...Silicon and heavy metal bonded directly to the same chalcogen	41	...Carbon or halogen bonded directly to the metal
11	...Heavy metal bonded directly to unsaturated five-membered carbocyclic ring	42	..Vanadium, niobium, or tantalum containing (V, Nb, or Ta)
12	...At least three carbons bonded directly to silicon	43	...Carbon bonded directly to the metal (e.g., cyclopentadienyl vanadium tetracarbonyl, etc.)
13	..Phosphorus containing	44	...The metal is bonded directly to X of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens (e.g., vanadyl xanthate, etc.)
14	...Additional diverse heavy metal or aluminum containing	45	..Manganese or rhenium containing (Mn or Re)
15	...The heavy metal is bonded directly to the carbon of a -C(=X)- group, wherein X is chalcogen (e.g., cyclopentadienyl manganese dicarbonyl triphenyl phosphine, etc.)	46	...Carbon bonded directly to the metal (e.g., ethyl thiomanganese tricarbonyl, etc.)
16	Iron, cobalt, nickel, ruthenium, rhodium, palladium, osmium, iridium, or platinum containing (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir or Pt)	47	The metal is bonded directly to an unsaturated 5-membered carbocyclic ring and to at least three -C(=X)- groups, wherein X is chalcogen (e.g., cyclopentadienyl manganese tricarbonyl, indenyl manganese tricarbonyl, etc.)
17	...Plural phosphori bonded directly to the same nitrogen or chalcogen (e.g., pyrophosphates, etc.)	48	Chalcogen or -C(=X)-, wherein X is chalcogen, bonded directly to the unsaturated 5-membered carbocyclic ring
18	...Plural phosphori bonded directly to the same carbon or attached to each other by an acyclic chain which chain consists of carbons or of carbons and chalcogens	49	...The metal is bonded directly to X of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens (e.g., manganese acetate, etc.)
19	...Carbon bonded directly to the phosphorus	50	Nitrogen containing
20	Plural carbons bonded directly to the phosphorus	51	..Titanium, zirconium, or hafnium containing (Ti, Zr, or Hf)
21	Exactly three carbons bonded directly to the phosphorus (e.g., triphenylphosphines, etc.)	52	...Carbon bonded directly to the metal
22	And carbon bonded directly to the heavy metal	53	Plural unsaturated 5-membered carbocyclic rings bonded directly to the metal
23	Hydrogen or halogen bonded directly to the heavy metal	54	...Plural chalcogens bonded directly to the metal (e.g., alkyl titanates, titanate esters, etc.)
24	...Exactly four chalcogens bonded directly to the phosphorus (e.g., phosphates, orthophosphates, etc.)		
25	At least two of the chalcogens are sulfur (e.g., zinc dihydrocarbyl dithiophosphates, etc.)		
26	Nitrogen or -C(=X)- containing, wherein X is chalcogen		
27	..Aluminum containing		
28	..Plural diverse heavy metals containing		
29	...Heavy metal double bonded directly to heavy metal		
30	...Arsenic, antimony, or bismuth containing (As, Sb, or Bi)		

JUNE 1985

ORGANIC COMPOUNDS (Class 532, Subclass 1)	80	Carbocyclic ring bonded directly to the chalcogen
..HEAVY METAL CONTAINING (e.g., Ga, In or Ti, etc.)	81	..Germanium, tin, or lead containing (Ge, Sn, or Pb)
..Titanium, zirconium, or hafnium containing (Ti, Zr, or Hf)	82	...Tin bonded directly to tin or lead bonded directly to lead
...Plural chalcogens bonded directly to the metal (e.g., alkyl titanates, titanate esters, etc.)	83	...Plural heavy metals bonded directly to the same chalcogen (e.g., two germaniums bonded directly to the same oxygen, etc.)
55 Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens	84	Exactly three carbons bonded directly to each of the metals (e.g., bis-tributyl tin oxides, etc.)
56 ...Nitrogen or halogen containing	85	...Sulfur double bonded directly to chalcogen
57 ...Chromium, molybdenum, or tungsten containing (Cr, Mo, or	86	Exactly three carbons bonded directly to the metal
58 ...Carbon bonded directly to the metal	87	...Carbon bonded directly to the metal
59 ...Chalcogen double bonded directly to the carbon (e.g., molybdenum pentacarbonyls, etc.)	88	Chalcogen bonded directly to the metal
60 Carbocyclic ring bonded directly to the metal	89	Plural chalcogens bonded directly to the metal
61 ...Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens	90	At least one of the chalcogens is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens
62 The carbons of plural -C(X)=X- groups, are bonded directly to each other, to the same acyclic carbon, (e.g., chromium oxalates, etc.)	91	Sulfur containing (e.g., organotinmercaptic carboxylic acid ester sulfides, etc.)
63 Nitrogen or halogen containing	92	Acyclic carbon to carbon unsaturation containing (e.g., diorganotin maleates, etc.)
64 ..Arsenic, antimony, or bismuth containing (As, Sb, or Bi)	93	Having -C(=X)X-, are the same or diverse chalcogens, attached indirectly to the metal by nonionic bonding (e.g., dialkyl tin thioglycolic acid esters, etc.)
65 ...Arsenic double bonded directly to arsenic (e.g., arsenobenzenes, etc.)	94	The chalcogen is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens
66 Containing two benzene rings each having nitrogen, chalcogen and one of the arsenics bonded directly thereto (e.g., arspenamines, etc.)	95	The compound consists of the metal, carbon and hydrogen or the metal, carbon, hydrogen and halogen (e.g., tetraalkylleads, etc.)
67 Sulfur double bonded directly to chalcogen (e.g., neoparsphenamines, etc.)	96	Preparing by utilizing a magnesium containing material (e.g., Grignard reagent, etc.)
68 ...Tricyclo ring system having a six-membered ring, which includes heavy metal and nitrogen or chalcogen, as one of the cyclos (e.g., phenoxarsines, phenarsazines, etc.)	97	Preparing by interchange of radicals between heavy metal atoms (e.g., redistribution, disproportionation, etc.)
69 ...Sulfur double bonded directly to chalcogen	98	Preparing by reacting free heavy metal or heavy metal containing alloy with hydrocarbyl halide (e.g., reacting Pb-Wa alloy with hydrocarbyl chloride, etc.)
70 ...Carbon bonded directly to the metal	99	Additional heavy metal containing material or aluminum containing material utilized
71 ...Chalcogen bonded directly to the metal (e.g., arsine oxides, etc.)	100	Phosphorus containing material or organic nitrogen containing compound utilized
72 Plural chalcogens bonded directly to the metal	101	Organic chalcogen containing compound or additional organic halogen containing utilized
73 Exactly three chalcogens bonded directly to the metal (e.g., arsonic acids, arsonates, etc.)	102	Preparing by utilizing boron, aluminum, gallium, indium, or thallium
74 Nitrogen and the metal bonded directly to the same benzene ring (e.g., arsanilic acids, etc.)	103	Purification or recovery
75 Having -C(=X)-, wherein X is chalcogen, attached directly or indirectly to the nitrogen by acyclic nonionic bonding	104	Halogen bonded directly to the metal
76 ...Chalcogen bonded directly to the metal	105	...Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens
77 ...Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens	106	Carbocyclic ring bonded directly to the carbon of the -C(=X)X- group (e.g., lead phthalates, etc.)
78 Carbocyclic ring bonded directly to the carbon of the -C(=X)X- group		
79 The carbons of plural -C(=X)X- groups are bonded directly to each other, to the same carbon, or to a chain consisting of carbons, which carbons may be part of a ring (e.g., bismuth tartrates, etc.)		

JUNE 1985

ORGANIC COMPOUNDS (Class 532, Subclass 1)	131	The chalcogen is part of a -C(=X)X-group, wherein the X's are the same or diverse chalcogens
..HEAVY METAL CONTAINING (e.g., Ga, In or Tl, etc.)	132	Carbocyclic ring bonded directly to the carbon of the -C(=X)X- group
..Germanium, tin, or lead containing (Ge, Sn, or Pb)	133	The carbons of plural -C(=X)X-groups are bonded directly to each other, to the same carbon, or to a chain consisting of carbons, which carbons may be part of a ring (e.g., zinc glutamates, etc.)
107 ...Containing -C(=X)X-, wherein the X's are the same or diverse chalcogens		Nitrogen containing (e.g., zinc ethionates, etc.)
108 Nitrogen containing		Carbocyclic ring bonded directly to the chalcogen (e.g., zinc phenolates, zinc thiophenates, etc.)
108 Carbocyclic ring and the metal are bonded directly to the same chalcogen (e.g., stannous catecholates, etc.)	134	Ruthenium, rhodium, palladium, osmium, iridium, or platinum containing (Ru, Rh, Pd, Os, Ir, or Pt)
109 Plural chalcogens and plural nitro groups bonded directly to the same benzene ring (e.g., lead styphnates, lead salts of di-nitroresorcinol, etc.)	135	...Nitrogen bonded directly to the metal
110 ..Copper, silver, or gold containing (Cu, Ag, or Au)	136	..Iron, cobalt, or nickel containing (Fe, Co, or Ni)
111 ...Sulfur double bonded directly to chalcogen	137	...Sulfur double bonded directly to chalcogen
112 ...Carbon bonded directly to the metal	138	...Carbon bonded directly to the metal
113 ...Chalcogen bonded directly to the metal	139	...Chalcogen double bonded directly to the carbon (e.g., butadiene iron tricarbonyls, etc.)
114 The chalcogen is part of a -C(=X)X-group, wherein the X's are the same or diverse chalcogens	140	Carbocyclic ring bonded directly to the metal
115 Carbocyclic ring bonded directly to the carbon of the -C(=X)X- group	141	Plural unsaturated five-membered carbocyclic rings bonded directly to the metal (e.g., ferrocenes, bis indenyl iron, etc.)
116 Nitrogen containing	142	Chalcogen, nitrogen or halogen containing
117 Containing -C(=X)-, wherein X is chalcogen	143	Chalcogen, nitrogen, halogen or -C(=X)-, wherein X is chalcogen, bonded directly to at least one of the carbocyclic rings
118 ..Zinc, cadmium, or mercury containing (Zn, Cd, or Hg)	144	...Chalcogen bonded directly to the metal
119 ...Sulfur double bonded directly to chalcogen	145	The chalcogen is part of a -C(=X)X-group, wherein the X's are the same or diverse chalcogens
120 Containing -C(=X)-, wherein X is chalcogen (e.g., zinc formaldehyde sulphonylates, etc.)	146	Nitrogen containing (e.g., ferric chelates of ethylenediaminetetracetic acid, etc.)
121 ...Carbon bonded directly to the metal	147	Salts of acyclic monocarboxylic acids (e.g., nickel formate, cobalt acetate, etc.)
122 Chalcogen bonded directly to the metal	148	Carbocyclic ring bonded directly to the chalcogen
123 The carbon is part of a carbocyclic ring (e.g., phenyl mercury nitrate, phenyl mercury phenolates, etc.)	149	..Aluminum containing
124 Hydrogen or -C(=X)-, wherein X is chalcogen, bonded directly to the chalcogen (e.g., H-X-Metal-Ring-H, -C(=X)X-Metal-Ring-H, phenyl mercury hydroxides, phenyl mercury acetates, etc.)	150	..With preservative or stabilizer
125 The carbon of the -C(=X)X- group is bonded directly to the carbocyclic ring or to a different carbocyclic ring (e.g., phenyl mercury salicylates, oxymercuroic benzoic acid anhydrides, etc.)	170	..Boron containing
126 Additional chalcogen bonded directly to the carbocyclic ring (e.g., acetoxymercuro nitroresols, etc.)	171	..Silicon containing
127 Hydrogen or -C(=X)-, wherein X is chalcogen, bonded directly to the chalcogen (e.g., H-X-Metal-HCH-, -C(=X)X-Metal-HCH-, etc.)	172	..Phosphorus containing
128 Cyano, nitrogen or halogen bonded directly to the metal	173	..Ring aluminum containing
129 The compound consists of the metal, carbon and hydrogen (e.g., dialkyl zinc, etc.)	174	..Nitrogen bonded directly to the aluminum
130 ...Chalcogen bonded directly to the metal	175	..Oxygen double bonded directly to sulfur
	176	..Plural aluminums containing
	177	...Chalcogen bonded directly to aluminum
	178	...Halogen bonded directly to aluminum (e.g., sesquihalides, etc.)
	179	...Chalcogen bonded directly to aluminum
	180	...Plural chalcogens bonded directly to the same aluminum
	181	At least one of the chalcogens is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens
	182	
	183	

JUNE 1985

ORGANIC COMPOUNDS (Class 532, Subclass 1)	427	..Sulfur attached indirectly to silicon by nonionic bonding
..Aluminum containing	428	...Chalcogen bonded directly to sulfur
..Chalcogen bonded directly to aluminum	429	...The sulfur is part of a -SH or -SC(=X)- group, wherein X is chalcogen (H of -SH may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
...Plural chalcogens bonded directly to the same aluminum		..Plural silicons bonded directly to each other
....At least one of the chalcogens is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens	430	..Plural silicons bonded directly to the same carbon or attached by a chain consisting of carbons, which carbons may be part of a ring
184 Ring bonded directly to the carbon of the -C(=X)X- group	431	...Plural silicons bonded directly to the same or different benzene rings that form all or part of the chain
185 Preparing by oxidation	432	Two silicons bonded directly to the same oxygen
186 ..Halogen bonded directly to the aluminum	433	...Two silicons bonded directly to the same oxygen
187 ..Processes of preparing, purifying or recovering compounds having plural carbons bonded directly to the same aluminum	434	...Two silicons bonded directly to the same acyclic saturated hydrocarbon
188 ...Aluminum containing alloy or elemental aluminum utilized	435	..Carbonyl attached directly or indirectly to silicon by nonionic bonding
189 And utilizing a material which contains a metal other than aluminum	436	...The carbonyl is part of a -COO- group
190 ...Reactants include unsaturated hydrocarbon and compound having carbon bonded directly to aluminum	437	Silicon and the carbon of the -COO- group are bonded directly to the same hydrocarbon group
400 ..Silicon containing	438	Two silicons bonded directly to the same oxygen
401 ..With preservative or stabilizer	439	Silicon and the oxy of the -COO- group are bonded directly to the same hydrocarbon group
402 ..Boron containing	440	Carbocyclic ring having silicon as part of one substituent and the -COO- as part of another substituent
403 ..Boron is ring member	441	Silicon is bonded directly to the oxy of the -COO- group
404 ..Phosphorus attached directly or indirectly to silicon by nonionic bonding	442	..Plural silicons attached by a chain consisting of oxygen and carbon, which chain may be part of a ring
405 ...Chalcogen bonded directly to silicon	443	...Two carbons bonded directly to the same oxygen
406 ..Ring consisting of carbon and silicon	444	..Two carbons bonded directly to the same oxygen
407 ..Nitrogen is ring member	445	...Additional oxygen bonded directly to the silicon and to a group containing the oxygen and two carbons
408 ...Chalcogen is member of the ring	446	...Two carbocyclic rings bonded directly to the oxygen
409 ...Plural silicons in the ring	447	...One of the two carbons is part of a substituent on the oxygen, which substituent contains halogen and does not contain silicon or a benzene ring
410 ..Nitrogen attached directly to silicon by nonionic bonding	448	..Hydroxy bonded directly to carbon or peroxy bonded directly to two carbons or to hydrogen and carbon (H of the hydroxy or the H bonded to the peroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
411 ...Having -C(=X)-, wherein X is chalcogen, bonded directly to the nitrogen	449	..Two silicons bonded directly to the same oxygen
412 ...Plural silicons bonded directly to the nitrogen	450	...Hydrogen bonded directly to silicon
413 ..Nitrogen attached indirectly to silicon by nonionic bonding	451	...Halogen bonded directly to silicon
414 ...The nitrogen is in an isocyanato or isothiocyanato group (i.e., -NCO or -NCS)	452	...Three carbons bonded directly to the same silicon
415 ...The nitrogen is in a cyano group (i.e., -CN)	453	Halogen attached indirectly to silicon by nonionic bonding
416 Chalcogen bonded directly to plural carbons or double-bonded directly to carbon	454	Three oxygens bonded directly to the same silicon
417 Chalcogen bonded directly to silicon	455	
418 ...Having -C(=X)-, wherein X is chalcogen, attached indirectly to silicon by nonionic bonding		
419 Nitrogen is bonded directly to the -C(=X)- group		
420 The -C(=X)- is part of a -C(=X)X- group, wherein the X's are the same or diverse chalcogens		
421 Additional nitrogen bonded directly to the -C(=X)- group		
422 ...Chalcogen attached directly to the nitrogen by nonionic bonding		
423 ...Plural carbons bonded directly to the same chalcogen		
424 ...Plural nitrogens bonded directly to the same carbon or attached by a chain consisting of carbons, which carbons may be part of a ring		
425 ...Two silicons bonded directly to the same oxygen		
426 ..Sulfur bonded directly to silicon		

289

BEST COPY AVAILABLE

JUNE 1985

- ORGANIC COMPOUNDS (Class 532, Subclass 1)
456 ..Silicon containing
...Two silicons bonded directly to the same oxygen
...Three carbons bonded directly to the same silicon
....Three identical hydrocarbon groups bonded directly to the same silicon
457 ...Silicon and carbon bonded directly to the same oxygen
458 Three oxygens each bonded directly to the same silicon and to carbon
459 ...Hydroxy bonded directly to silicon (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
460 ...Ring consisting of silicon and oxygen
461 Benzene ring containing
462 ...Preparing by utilizing a siloxane reactant
463 ..Hydroxy or peroxy bonded directly to the silicon (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
464 ..Ring consisting of silicon, oxygen, and carbon
465 ..Carbon attached directly or indirectly to the silicon by nonionic bonding (e.g., silanes, etc.)
466 ...Processes
467 Plural silicons in a reactant
468 Bonded directly to each other
469 Interchange of radicals between silicon atoms (e.g., redistribution, disproportionation, transesterification, etc.)
470 Forming group containing silicon and carbon bonded directly to the same oxygen (e.g., esters, etc.)
471 A silicon halide reacted with a hydroxy or oxirane-containing compound (H of hydroxy may be replaced by a substituted or unsubstituted ammonium ion or a Group IA or IIA light metal)
472 Elemental silicon, silicon-containing alloy or metal silicide reactant
473 Halogen, hydrogen halide, or a silicon halide utilized
474 Silicon to hydrogen bond formed
475 Dehydrohalogenation to produce carbon to carbon unsaturation
476 Halogenation of silicon-containing compound
477 Silicon to halogen bond formed
478 Silicon to carbon bond formed
479 Carbon to carbon unsaturation reduced by addition of a silicon hydride
480 Magnesium-containing reactant
481 By substitution of silicon bonded hydrogen
482 ...Silicon and carbon bonded directly to the same oxygen
483 Four oxygens bonded directly to the silicon
484 Halogen bonded directly to the silicon
485 Halogen bonded directly to acyclic carbon
486 Silicon and benzene ring bonded directly to the same oxygen
- 487 ...Hydrogen bonded directly to the silicon
488 ...Halogen bonded directly to acyclic carbon
489 ...Unsaturated carbocyclic ring containing

290

BEST COPY AVAILABLE

JUNE 1985

This Class is the first of a series, newly established, as part of a system for reclassifying Class 128, Surgery, into several related classes. Within the series, the subclasses are to be related as though each is part of the same class.

The portion of Class 128, Surgery, reclassified into this Class was obtained from the subclasses 207.19 to 274 (MEDICATOR) and subclasses 275 to 302 (RECEPTORS). The "MEDICATOR" subclasses contained dosing devices, including hypodermic injectors, syringes, depositors and applicators, containers, pump, and valves. The "RECEPTOR" subclasses contained aspirators, lacteal devices, catamenials, diapers, absorbent pads, and materials. All of these are now included in the new series Class 604, Surgery. In general, Class 604, Surgery, contains body treating and medicating methods and apparatus which includes the application, storing, collecting, introduction, or removal of materials from the body.

Class 604, Surgery, is to be considered an integral part of Class 128, Surgery, with the subclass of Class 604, Surgery, following the hierarchy of Class 128, and the Class Definition of Class 128, Surgery.

890	CONTROLLED RELEASE THERAPEUTIC MEANS	21	..With tubular injection means inserted into body
891	..Implanted		
892	..Osmotic or diffusion type release	22	..With means for cutting, scarifying, or vibrating (e.g., ultrasonic, etc.) tissue
893	..Ocular		
894	...Biodegradable means		
895	...Contact lens	23	..Gas application
896	...Percutaneous	24	..Gas mixed with other material
897	...Bandage	25	..Ozone
1	SWAB INCLUDING HANDLE (E.G., STICK, ETC.) WITH ABSORBENT MATERIAL AT END THEREOF	26	..Gas injected into body canal or cavity
		27	..Material introduced into and removed from body through passage in body inserted means
2	..Body treating material fed to absorbent material	28	..Method
3	..Means broken, cut, pierced, or torn to permit flow of material	29	..Peritoneal dialysis
4	BLOOD DRAWN AND REPLACED OR TREATED AND RETURNED TO BODY	30	..Flow control
		31	...By self-acting means or condition responsive sensor
5	..Constituent removed from blood and remainder returned to body	32	...Rotary valve
6	..Component of blood removed (i.e., pheresis)	33	...Slide or reciprocating valve
7	BLOOD TRANSFERRED BETWEEN DIFFERENT BODIES ALONG CONTINUOUS FLOW PATH (E.G., TRANSFUSION, ETC.)	34	...Deformable occluding tube valve
8	DEVICES TRANSFERRING FLUIDS FROM WITHIN ONE AREA OF BODY TO ANOTHER (E.G., SHUNTS, ETC.)	35	..With aspirating or vacuum removing means
9	..With flow control means (e.g., check valves, hydrocephalus pumps, etc.)	36	..Means moved by person to introduce and remove material
10	..With antisiphon means	37	...Hand-supported squeeze bulb
11	MEANS FOR INSERTING FIBROUS OR FORAMINOUS RESIDENT PACKING, RECEPTOR, OR MEDICAMENT CARRIER INTO BODY ORIFICE	38	...Piston
		39	..Structure of douche nozzle having separate ingress and egress passages therein
12	..With lubricating means	40	...With telescoping movement between ingress and egress passages
13	..With means for ejecting continuous length insert (e.g., gauze packing)	41	...With body orifice occluding means
14	..Distal portion of inserting means deformed, expanded, or ruptured to permit passage of insert therefrom	42	...Axially adjustable
15	..With slidable ejector (e.g., plunger or ram, etc.) inside tubular inserting means	43	..Body inserted conduit with separate ingress and egress passages
16	..Ejector moved into operating position from stored location inside or alongside inserting means	44	...Having body piercing means
17	...Ejector pivoted or swung into operating position	45	...Having air or gas venting passage
18	..Tubular inserting means releasably interlocked with ejector	46	..Treating material introduced into body by contact with wound formed therein by solid scarifier, cutter, or the like (e.g., scratching skin with vaccine coated needle, etc.)
19	MEANS FOR INTRODUCING OR REMOVING MATERIAL FROM BODY FOR THERAPEUTIC PURPOSES (E.G., MEDICATING, IRRIGATING, ASPIRATING, ETC.)	47	..With separate applicator for material or separate holder for material placed on applicator or in wound
20	..Infrared, visible light, ultraviolet, X-ray or electrical energy applied to body (e.g., iontophoresis, etc.)	48	..Treating material introduced into or removed from body orifice, or inserted or removed subcutaneously other than by diffusing through skin
		49	..Methods
		50	...Material introduction or removal responsive to sensed body condition
		51	...Material introduced into body or removed therefrom through piercing conduit (e.g., needle) inserted into body

291

BEST COPY AVAILABLE

MEANS FOR INTRODUCING OR REMOVING MATERIAL FROM BODY FOR THERAPEUTIC PURPOSES (E.G., MEDICATING, IRRIGATING, ASPIRATING, ETC.)	87	...Means broken, cut, pierced or torn to permit mixing
..Treating material introduced into or removed from body orifice, or inserted or removed subcutaneously other than by diffusing through skin	88	Septum
..Methods	89	...Closure or barrier between compartments moved to permit mixing
...Material introduced into body or removed therefrom through piercing conduit (e.g., needle) inserted into body	90	Closure moved, expanded, or flexed by force transmitted by liquid
52 Material introduced into or removed from blood vessel	91	Closure moved by relative movement between closure and separate protruding member
53 By catheter	92	...Solid dissolved in liquid
54 ...Material introduced into or removed from body orifice	93	..Material introduced or removed through conduit, holder, or implantable reservoir inserted in body
55 Female reproductive tract	94	...Dual nozzles for insertions into paired body orifices (e.g., nasal passages, etc.)
56 ...Liquid mixed with solid or different liquid	95	...Conduit with self-propelled or remote control means
57 ..Means for placing solid treating material in body	96	...Having means inflated in body (e.g., inflatable nozzle, dilator, balloon catheter, occluder, etc.)
58 ...Powder dispenser	97	Including means forcing inflation fluid into inflatable means
59 ...Means for ejecting solid from holder	98	Pressurized inflation means
60 Solid ejected from body inserted conduit	99	With inflation or deflation control means
61 Eject means moved by force applied to trigger associated with pistol grip	100	With indicator means
62 Solid units successively fed to conduit from supply means (e.g., magazine, etc.)	101	With plural balloons on conduit
63 Eject means driven by spring	102	With aperture in conduit proximal of inflated means
64 Solid loaded into injector through opening in side wall of plunger housing	103	With means bonding or mechanically securing balloon sleeve or connector member (e.g., coupling funnel, etc.) to conduit
65 ..Material flow varying means controlled by condition responsive sensor	104	...Having means expanding body orifice or canal (e.g., dilator, retaining means, etc.)
66 ...Sensor responsive to body condition	105	Expanding bow
67 ...Sensor controls pump, motor, or pressure driven means	106	Expanding arm or finger
68 ..Needless hypodermic injector	107	Expansion actuated by axially movable member
69 ...Material expelled from injector by explosive charge	108	Rotatable means actuates axially movable member
70 ...Material expelled from injector by pressurized fluid	109	Expansion actuated by rotatable means (e.g., threaded or cammed member, etc.)
71 ...Multidose type	110	...Having means for preventing reuse of device
72 ...Structure of material reservoir replaceably held in injector	111	...Having means for indicating device is defective, used, or tampered with
73 ..Means forceably introducing or removing material from body orifice or wound	112	...Having means for desensitizing skin
74 ...Lacteal extractors (e.g., breast pump, etc.)	113	...Having means for cooling or heating body, treating or collected material or device
75 With collapsible bulb means	114	Electric means
76 With suction generated orally by person or user	115	...Having means for protruding skin to facilitate piercing it
77 ..Structure of means contacting portion of head (e.g., tongue, etc.) during placement of treating material in mouth or throat	116	...Having means for locating or identifying point where body is to be pierced (e.g., apertured body fitting template, etc.)
78 ...Drinking cup	117	...Having structure for controlling depth of insertion of body piercer
79 ...Means for engaging head to hold feed device in mouth	118	...Having means for varying, regulating, indicating, or limiting injection pressure or aspirating suction
80 ..Gravity feed to body from plural material reservoirs	119	...Means varying or regulating suction
81 ...With self-acting sequential flow from reservoirs	120	With cyclic or timed regulation
82 ..Means for intermixing liquid with solid or different liquid	121	On piston type injector or aspirator
83 ...Treating material introduced directly into liquid stream path	122	...Having means for eliminating and/or preventing injection of air into body
84 Solid treating material	123	From pump injection device
85 Liquid stream passes through reservoir containing treating material	124	From injection means moved by person to impel material into body
86 Septum pierced by conduit	125	From hand supported injection means

JUNE 1985

	MEANS FOR INTRODUCING OR REMOVING MATERIAL FROM BODY FOR THERAPEUTIC PURPOSES (E.G., MEDICATING, IRRIGATING, ASPIRATING, ETC.)	154	Material impelled by nonreciprocating piston driven by motor
	..Treating material introduced into or removed from body orifice, or inserted or removed subcutaneously other than by diffusing through skin	155	With threaded drive means
	..Material introduced or removed through conduit, holder, or implantable reservoir inserted in body	156	...Conduit forced into body by self-acting fluid pressure, motor-driven, or mechanical energy storing means
	...Having means for eliminating and/or preventing injection of air into body	157	Conduit impelled by spring
126	By hydrophilic or hydrophobic filters	158	...Body entering conduit axially movable within body piercing conduit while former is disposed in the body
127	By low level float cutoff	159	Having mechanical means for feeding conduit through piercing conduit
128	...Having siphon means for removing material from external source or body	160	Having longitudinal groove or slot in piercing conduit to permit removal from body entering conduit
129	...With vacuum breaking means (e.g., vent, etc.)	161	Piercing conduit longitudinally separable for removal from body entering conduit
130	...Having projectile injector operated upon impact with body	162	Having guard on piercing conduit for protecting body entering conduit
131	...Treating material forced into or out of body by self-acting fluid pressure, motor-driven, or mechanical energy storing means (e.g., pressure infusion or aspiration, etc.)	163	Having bag or sheath enclosing body entering conduit
132	Material impelled into body by contraction of expanded elastic material reservoir	164	...Body piercer, obturator rod, or stylet axially movable within body entering conduit while latter is disposed in body
133	Material exhausted from body by expansion of contracted elastic receptacle or resilient means therein	165	Having means preventing relative movement between elements during their insertion into body
134	Material impelled by spring	166	Having groove or reduced portion on piercer, rod, or stylet for receiving distal end of conduit
135	Spring drives piston	167	Having resealable closure means for conduit
136	Material conduit forced into body by spring	168	Having telltale for showing entry of blood into conduit
137	Spring triggered by skin contacting means	169	Flow control means in conduit operable after removal of piercer, obturator, or stylet from conduit
138	Portion of conduit stored in material supply means	170	Having blunt tip on obturator rod or stylet
139	Material supply means pierced by conduit	171	...Body entering conduit axially movable within flexible protective sheath facilitating sterile insertion into body duct
140	Material impelled by pressurized charge of gas or vacuum	172	Having lubricating means
141	Material impelled by means (e.g., diaphragm, piston) moved by gas or vacuum pressure	173	...Injection or aspiration device having plural body entering conduits
142	Reservoir prepressurized or exhausted by squeeze bulb	174	...Means for securing conduit to body
143	Piston impelled by gas or vacuum pressure	175	Implanted connecting means
144	And impelling material conduit into body	176	Vacuum
145	Pressurizing gas generated by chemical reaction	177	And used as conduit manipulator (e.g., foldable gripper wings, etc.)
146	Pressurizing gas or vacuum charge produced by mechanical actuator (e.g., air pump, etc.) associated with injector	178	Axially movable clamp means
147	Pressurizing gas or vacuum charge supplied by external storage source	179	Belt, strap, or band securing means
148	Means broken, cut, pierced, or torn to permit material flow	180	Adhesive securing means
149	Material impelled by negative pressure created by current of fluid (e.g., air entrainment, etc.)	181	...Means moved by person to inject or remove fluent material to or from body inserted conduit, holder, or reservoir
150	Material impelled by hydraulic or water hydrant pressure	182	Means moved by weight of body placed thereon
151	Material impelled by pump	183	Material expelled from reservoir having separate external feed means and discharge outlet
152	Reciprocating piston type	184	Material fed to reservoir through hollow piston
153	Deformable resilient chamber type	185	Reservoir squeezed to expel material therefrom
		186	Means for metering material flow to or from body

293

BEST COPY AVAILABLE

JUNE 1985

MEANS FOR INTRODUCING OR REMOVING MATERIAL FROM BODY FOR THERAPEUTIC PURPOSES (E.G., MEDICATING, IRRIGATING, ASPIRATING, ETC.)	212	Having collapsible material reservoir (e.g., squeeze bulb, etc.)
.Treating material introduced into or removed from body orifice, or inserted or removed subcutaneously other than by diffusing through skin	213	Having means to prevent fluid return to reservoir
..Material introduced or removed through conduit, holder, or implantable reservoir inserted in body	214	Mechanical means (e.g., piston, clamp, etc.) moved to collapse reservoir
...Means moved by person to inject or remove fluent material to or from body inserted conduit, holder, or reservoir	215	Having orifice occluding means
187 Injector or aspirator syringe supported only by person during use (e.g., hand held hypodermic syringe, douche tube with forced injection, etc.)	216	Bellows-type reservoir
188 Having body piercing conduit mounted on syringe for rotation about its longitudinal axis	217	Reservoir pressurized or exhausted by squeeze bulb
189 Having medical information (e.g., name of patient or medicament, etc.) means	218	With piston or plunger for expelling material from body or injector reservoir
190 Having fluid filter	219	Diameter of piston selectively adjustable
191 Having plural material reservoirs	220	Means for preventing accidental displacement of piston
192 Having cover or protector for body entering conduit	221	Piston or piston actuator slidable in or against seal ring mounted on reservoir
193 Used as piston actuator after removal from conduit covering or protecting position on syringe	222	Seal ring mounted on piston
194 Entire body entering conduit stored in cavity in piston or piston actuator inside syringe prior to use	223	Injector components pivoted relative to each other to move piston
195 Portion of body entering conduit stored in material receiving syringe reservoir	224	Piston moved by screw or rack
196 And extended therefrom by piston when syringe is used	225	Means for preventing destructive piston impact on end of material reservoir
197 Common cover or protector for body entering conduit and material syringe reservoir	226	Closable storage cavity included in piston or piston actuator
198 Cover or protector for body entering conduit movable axially relative to one another	227	Specific structure of finger grip for moving piston
199 Having structure for facilitating sterilization of syringe or preventing contamination of material therein	228	Specific structure of means coupling piston to piston actuator
200 Means broken, cut, pierced, or torn to permit material flow to or from body	229	Piston actuator contacting resilient retractable portion on piston
201 Septum pierced by conduit to permit flow	230	Means for reducing piston sliding friction (e.g., oil applicator, use of low friction material, etc.)
202 Septum flexed toward conduit to force conduit therethrough	231	Material passed to or from body through aperture in piston
203 Septum pierced is piston head	232	Material reservoir (e.g., cartridge, etc.) removably mounted in syringe
204 Septum within collapsible material reservoir	233	Piston actuator mounted in means (e.g., yoke, etc.) pivoted to syringe
205 Septum piercing conduit separate from body entering conduit	234	Material reservoir centered or clamped in syringe by slidable component
206 Septum piercing conduit attached to injector by turning one component relative to another (e.g., thread, bayonet type connector, etc.)	235	Means for ejecting, or facilitating ejection of material reservoir from syringe
207 Having means for metering material flow to or from body	236	Material flow controlled by valve or movable closure (e.g., plug in orifice, etc.)
208 Including means for controlling piston stroke length	237	Diaphragm valve
209 By ratchet and pawl	238	Removable plug
210 By detent	239	Specific structure of body entering or piercing conduit
211 By rotatable means (e.g., micrometer, etc.)	240	Specific structure of means connecting body entering conduit to syringe
	241	Conduit holder attached to another syringe component by thread means
	242	Conduit holder attached to another injector component by cam
	243	Conduit or holder therefor removably attached to another injector component by friction
	244	...Means broken, cut, pierced, or torn to permit material flow to body

294

BEST COPY AVAILABLE

JUNE 1985

MEANS FOR INTRODUCING OR REMOVING	279	Vaginal or douche type
MATERIAL FROM BODY FOR THERAPEUTIC	280	Flexible catheter/cannula or means
PURPOSES (E.G., MEDICATING,		(e.g., coupling, etc.) used
IRRIGATING, ASPIRATING, ETC.)		therewith
..Treating material introduced into or	281	Having shape retaining memory
removed from body orifice, or	282	Having rigidifying or
inserted or removed subcutaneously		anticollapsing means (e.g.,
other than by diffusing through skin		reinforcing coils, etc.)
..Material introduced or removed through	283	With coupling or connector
conduit, holder, or implantable		structure
reservoir inserted in body	284	Having branched shapes (e.g., T or
245 ...Material flow to or from body		Y drains, etc.)
terminated by self-acting means	285	...Treating material insert retained in
246 ...Means for controlling material flow		body orifice
to or from body, or metering a	286	Including foraminous material (e.g.,
predetermined dose or amount		sponge, etc.) or fibrous element
247 Having fluid responsive means (e.g.,		other than withdrawal cord
check valve, etc.)	287	With soluble cover means
248 Rotatable type valve	288	Soluble in body (e.g., suppository,
249 ...Slide or reciprocating valve		etc.)
250 Conduit deforming clamp	289	..Treating material applied to or removed
251 Drip meter		from external surface of body, or
252 Having fluid filter		cutaneous layer of skin (e.g., eye
253 Having drip sensor		treatment, removal of skin
254 Having float controlling or		impurities, etc.)
indicating material flow from	290	..Method of applying or removing
chamber		material to or from body
255 Mounted in material reservoir	291	..Means for cooling or heating material
256 Having flow closing or opening means	292	..Glove for applying or removing
(e.g., plug, cap, seal, etc.)		material to or from wearer's hand
257 ...Liquid reservoir with body inserted	293	..Specific structure for applying or
nozzle or feed conduit connected		removing material to or from foot or
therewith	294	leg
258 Having plural feed conduits		..Means for treating eye or surface of
259 With storage means (e.g., cabinet,		ocular cavity
etc.) for reservoir and material	295	...Dropper, douche, or eyecup for
feed conduit		applying liquid to eye
260 Having liquid level indicator	296	Having means for aerating liquid
261 Having means for supporting body	297	Having means for scavenging liquid
inserted nozzle tip or free end of		after contact with eye
feed conduit after use	298	Having means for metering liquid
262 Bag type		flow to eye
263 ...Removable cover or protector for body	299	Having means for preventing contact
inserted conduit		of liquid with syringe bulb
264 ...Body inserted tubular conduit	300	Having means for positioning liquid
structure (e.g., needles, cannulas,		dispenser relative to eye
nozzles, trocars, catheters, etc.)	301	Eye cup
265 With body soluble, antibactericidal	302	Guard or guide
or lubricating materials on	303	..Mask for applying or removing material
conduit		to or from wearer's face
266 With anticlogging means on conduit	304	..Bandage, pad, or shield placed on body
(e.g., ant clotting,		for sustained treatment thereof
decalcification, tissue occlusion,	305	...Treating material supplied to
etc.)		bandage, pad, or shield through
267 Mechanical cleaning means		conduit connected to remote supply
268 With barrier, shield, or suction	306	...Treating material reservoir broken,
relief means adjacent tissue		cut, pierced, or torn to apply
contacting orifice		treating material to body
269 With anticoagulant supply means	307	...Adhesively attachable to body
270 Having weighted tip means on conduit	308	...Bandage, pad, shield, or attaching
promoting advance thereof through		means extendable around body
alimentary tract		portion
271 Having evaginating or invaginating	309	..Solid treating material (e.g., styptic
capability		pencil, etc.) application
272 Body piercing conduit (e.g., needle,	310	..Fluent treating material held in
etc.)		reservoir in hand-supported
273 Specific structure for preventing		applicator
or minimizing inconvenience	311	...With piston or plunger for expelling
caused by breakage during		material therefrom
insertion of conduit into body	312	..Sudatory devices (e.g., removing
274 Specific structure for preventing		sweat, etc.)
coring of body tissue	313	..Means for removing material from
275 Nozzle insertable into body orifice		surface by suction
276 Having external means for receiving	314	...Venom extractor
material discharged from body	315	...Suction generated by self-acting
orifice		fluid pressure, motor-driven or
277 Colostomy apparatus		mechanical energy storing means
278 Having orifice sealing means		(e.g., spring, etc.)

295

BEST COPY AVAILABLE

	MEANS FOR INTRODUCING OR REMOVING MATERIAL FROM BODY FOR THERAPEUTIC PURPOSES (E.G., MEDICATING, IRRIGATING, ASPIRATING, ETC.)	351	With separate body securing means
	..Treating material applied to or removed from external surface of body, or cutaneous layer of skin (e.g., eye treatment, removal of skin impurities, etc.)	352	Adherent or inflatable type
	..Means for removing material from surface by suction	353	Body or body member encircling belt, strap, or harness
316	...Means moved by person to produce suction (e.g., squeeze bulb, piston, etc.)	354	Catamenial receptacle
317	MEANS AND METHODS FOR COLLECTING BODY FLUIDS OR WASTE MATERIAL (E.G., RECEPTACLES, ETC.)	355	..Receptacle externally sealing around body opening to receive natural or surgical discharge
318	..Material collector with condition indicator	356	..Receptacle placed under or against body to collect discharge during surgical or obstetrical operations
319	..Aspiration collection container or trap (e.g., canister, etc.)	357	...Flexible apron type
320	..Having vacuum shutoff means (e.g., float valve, etc.)	358	..Absorbent pad for external or internal application and supports therefor (e.g., catamenial devices, diapers, etc.)
321	..Having liquid seal means	359	..Deodorant containing
322	..Material collector or receptacle having attaching means to static support independent of body	360	..Containing inhibitor to ammonia or bacteria formation
323	..With flow control means (e.g., antibackflow valve, etc.)	361	..With wetness indicator or alarm
324	..With vent or overflow opening	362	..With radio-opaque material or signaling means for residual material
325	..With drip meter	363	..With lubricating means to facilitate insertion
326	..Conduit or connector for material collector/receptor	364	..Containing hydrosoluble, hydrodegradable or body heat soluble material
327	..Receptacle attached to or inserted within body to receive discharge therefrom	365	..Containing fiber or material bonding substance
328	..Receptacle or portion thereof inserted within body cavity	366	...Thermoplastic
329	...Receptacle structured for collecting urine from human female	367	..Containing particulate materials, fibers, or particles
330	...Intravaginal	368	...Collagen or gelling material
331	With external collector or support means	369	...Foam or cellular structure material
332	..Receptacle engaging around permanent surgically constructed body opening (e.g., colostomy, etc.)	370	...Thermoplastic
333	...Having deodorant means (e.g., filter)	371	Nylon
334	...Having additional irrigation port or means	372	...Synthetic resin
335	...With flow control means (e.g., valve, etc.)	373	...Natural or synthetic rubber
336	...With hydrocolloid type seal (e.g., gel, starch, karaya gum, etc.)	374	...Cellulose or cellulosic materials
337	...Means for covering stoma or body opening	375	With additional chemical modifications (e.g., paper, chemical pulp, rayon, etc.)
338	...Mounting ring or annulus around body opening	376	Carboxy-radical containing
339	Bag attached to seal ring	377	Cotton or derivative thereof
340	With bag anticollapse feature	378	..Containing layers having differing absorption characteristics (e.g., flow control, wicking, etc.)
341	Body engaging surface of seal ring covered by bag wall or portion thereof	379	...Compressed layer
342	Means attaching bag to seal ring	380	Having discontinuous areas of compression
343	Including body support means	381	...Layer coated or treated to decrease absorbency
344	Adhesive	382	Discontinuous coating or treatment of layer
345	...With body support means (e.g., belt, garment, etc.)	383	...Needled or punched layer
346	..Receptacles receiving protruding body member (e.g., ears, genitalia, breast, etc.)	384	..Having specific fiber orientation or weave
347	...Genital receptacle	385 R	...Having specific design, shape, or having specific design, shape, or structural feature
348	With separate fecal receiving compartment	385 A	...Having elastic edge
349	Receptacle structured for collecting urine or discharge from male member (e.g., external catheter, etc.)	386	..Pad having means for securing pad during use
350	With antibackflow means	387	...By securing to garment or person
		388	...Shoulder supported garment
		389	...Adhesive tab fastener element
		390	With release means associated with tab fastener
		391	...By fabric strip fastener element (e.g., VELCRO, etc.)
		392	...By strap, belt, tying, or endless band means
		393	..Specific garment, holder, or support for absorbent pad
		394	...Abdominal enclosing type
		395	With openable or removable crotch portion

JUNE 1985

- MEANS AND METHODS FOR COLLECTING BODY
FLUIDS OR WASTE MATERIAL (E.G.,
RECEPTACLES, ETC.)
- .Absorbent pad for external or internal
application and supports therefor
(e.g., catamenial devices, diapers,
etc.)
 - ..Specific garment, holder, or support
for absorbent pad
 - ...Abdominal enclosing type
 - 396 With endless waist encircling band
(e.g., panty type)
 - 397 ...Pad support having means to restrain
absorbent pad
 - 398 Pad restrained by means transverse
to width of the pad or fastener
element (e.g., strap, end flap, or
tuck)
 - 399 Button or snap fastener element
 - 400 ...Pad support or holder adjustable
relative to body crotch area
 - 401 ...With body attaching means for pad
support
 - 402 ...Pad holding or suspending device
 - 403 CONTAINER FOR BLOOD OR BODY TREATING
MATERIAL, OR MEANS USED THEREWITH
(E.G., NEEDLE FOR PIERCING CONTAINER
CLOSURE, ETC.)
 - 404 .Means for indicating condition of
container content
 - 405 .Filter for purifying or washing air
entering container
 - 406 .Filter or series thereof for liquid
entering or leaving container
 - 407 .Means for metering amount of content
drawn from container
 - 408 .Bag type
 - 409 ..With means for holding sample of
content
 - 410 ..Plural compartments or bags
 - 411 .Having hollow needle or spike for
piercing container or container
closure
 - 412 ..Conduit with hollow needle or spike at
each end thereof
 - 413 ..Pointed at both ends
 - 414 ..Mounted on one container and used to
pierce another container or closure
 - 415 .Container with piercable closure
 - 416 .Materials mixed within container

CROSS-REFERENCE ART COLLECTIONS

- 900 TELLTALE SHOWING ENTRY OF BLOOD INTO
BODY INSERTED CONDUIT
- 901 INJECTION DEVICE WITH THERMOMETER
- 902 SUCTION WANDS
- 903 MEDICAL CONTAINER WITH MATERIAL
AGITATION MEANS
- 904 TAMPONS
- 905 ASEPTIC CONNECTORS OR COUPLINGS (E.G.,
FRANGIBLE, PIERCABLE, ETC.)